

MACMILLAN'S
TEACHING IN PRACTICE
FOR INFANT SCHOOLS

PROJECTS AND PICTURES

EDITED BY
E. J. S. LAY

*In Four Volumes, with a Portfolio
of Sixty Coloured Class Pictures*

VOLUME THREE



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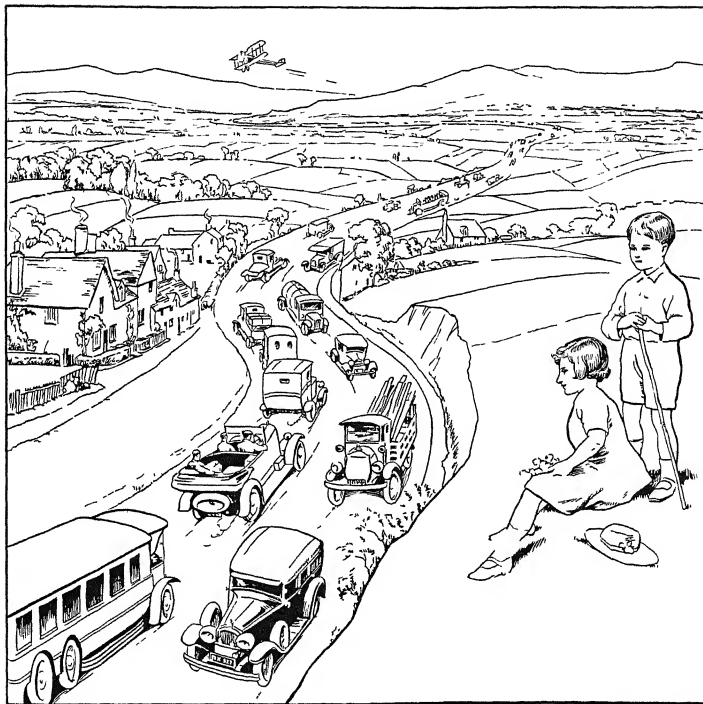
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CENTRE OF INTEREST— MEN WHO HELP US

XX. THE MOTOR DRIVER



THE USEFUL MOTOR

Drawing in Outline of Picture No. 25 in the Portfolio

Introduction.—In this series of pictures and talks on "Men who help us," we shall be giving the child a sense of his place in society, by showing him his dependence on other people beside his immediate circle of relatives and friends. A child naturally turns first of all to his parents for the satisfaction of his needs, but he will learn that they in turn are dependent upon shopkeepers and others for their requirements. In these talks we can try to show him something of the wider circle of people who help to minister to his comfort.

Description of Picture No. 25.—Two children, a girl and a boy, are watching a winding country road along which numerous motor vehicles are passing. The children

have evidently been for a ramble, for the girl holds a bunch of wild flowers. She is resting on the grassy top of a high bank which overlooks the road, her shady hat by her side. The boy stands near holding a rough walking stick. All around them stretches a wide country landscape, dotted with cottages and chequered with fields, bounded on the horizon by rolling hills. Through the middle of this countryside runs the road, with its double stream of motor traffic. Almost every kind of motor vehicle can be seen,—open cars, saloon cars, a 'bus, lorries, various kinds of vans, a petrol lorry, and a char-à-bancs. An aeroplane can be seen mounting in the sky above the hills.

(There is no frieze under this picture.)

LANGUAGE AND SPEECH TRAINING

Conversation on Picture No. 25.—The children should freely discuss and describe the picture. To stimulate thought and observation and to bring to the notice of the children any points overlooked, the teacher may make some of the following suggestions:—1. Find the two children. Give them names; e.g., *Peggy* and *John*. 2. What is Peggy doing? 3. What is John doing? 4. What are Peggy and John watching? 5. Tell what you see on the road. 6. Find a motor 'bus. Say what colour it is. 7. Find a lorry. Say what it is carrying. 8. Find an open car. Say how many people are in it. 9. Find a closed car. What is a closed car called? (*A saloon.*) 10. Find a van. 11. Find a char-à-bancs. Say what colour it is. 12. Are all these vans and cars driven by motors? 13. What do we call a man who drives a motor? 14. How many wheels have most motors? 15. How many wheels has the green motor 'bus in the picture? 16. What is the *bonnet* of a motor car? 17. How can a motor driver see to drive when it is dark? 18. What

colour is the back lamp of a motor? 19. Why does a motor need a lamp at the back? 20. Why do the motors on this road run in two lines? 21. On which side of the road must motors keep? 22. Why must you look both ways before you cross a road? 23. Does the picture show a town or a country place? 24. Tell what Peggy is holding. 25. Tell what John is holding. 26. Tell what you think Peggy and John have been doing. 27. Tell what you can see in the sky.

Talks to the children.—

Section I—What would two children have seen on the road if they had looked down upon it a hundred years ago?

They would not have seen any motor cars then. There would have been men walking, some carrying packs on their backs, men riding horseback, others leading one or more packhorses with loads strapped on their backs, carts, like the farm carts of to-day, drawn by big, heavy horses, and piled with all kinds of goods, private

carriages hurrying by, drawn by one or more horses, lighter and swifter than the cart horses, and lastly the stagecoach, drawn by two, four, or even six horses, dashing along and overtaking all the others. These were the only ways people had of getting about from place to place, or of carrying their goods, for railways were only just beginning to be built.

The first steam carriages were made before the railways were thought of, and at first these strange steam carriages were driven along the main roads; but they were very big and clumsy, and they made such a noise and a smoke that nobody liked them, especially when they frightened the horses and caused nasty accidents. A law was passed which ordered that any carriage, not drawn by a horse, must not go faster than two miles an hour on any public road, and that a man with a red flag must always walk in front of it.

Then men thought of building special tracks for these steam carriages, and by building a separate engine, and hooking on to it a line of carriages, they were able to carry far more people than could the old horse-drawn stage coaches. This was the beginning of the railways, and gradually more and more were made, until at last people began to use the railways more than the roads for travelling and for sending their goods.

Then an engine was invented which was driven by burning petrol, instead of being driven by steam. This could be made much smaller and lighter than a steam engine, because it did not have to carry large quantities of water and coal. For a long time, however, the first motor cars were not allowed to go faster than two miles an hour and still had to have a man with a red flag walking in front of them. As more and more motor cars were made this law became a nuisance, so it was done away with, and motor cars were altered and improved, and made to go faster and faster.

Then, after many trials and experiments, men managed to make a machine which

would fly. It was driven like a motor car by a petrol-burning engine, and nowadays we see aeroplanes of many different kinds flying from place to place.

Section II.—Let us think of some of the ways in which motor cars are used to give us pleasure.

When motor cars were first made they were so expensive that only rich people were able to buy them. But, as improvements were made and more factories were built, they became cheaper, till to-day great numbers of people are able to buy cars, and they can go off for pleasure rides and picnics whenever they have any spare time.

Even if we cannot afford to buy a car for ourselves, we can still go for rides in a motor carriage of one sort or another. If we are in a great hurry to catch a train, we can call a taxi to take us and our luggage to the station. Then there are the 'buses which take us quickly and cheaply from one part of a town to another, or if we wish for longer rides, out into the country. If we live in the country, 'buses are very useful to take us into the town for shopping. These 'buses have grown out of the old horse 'buses which used to be seen in most of the big towns.

Then there are the charrs-à-bancs, which we can hire for Sunday-school parties and outings of all kinds, and if we are going away for a holiday nowadays, we can choose whether we will go by railway or by motor coach.

The motor car has proved very useful to us when we are ill. The doctor can come to us much more quickly by car than in any other way, and very sick people can be rushed off to hospital by car or by motor ambulance.

Section III.—Besides the different kinds of motor carriages which are used for pleasure trips, there are many kinds of vans and lorries used for carrying goods, all driven by petrol engines. The railway

Mr. Peg and his Motor



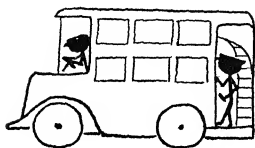
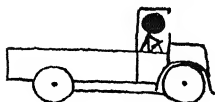
Mr. Peg buys a car:

He learns to drive



He takes Mrs. Peg for
a ride.

They pass a lorry



and a 'bus.

is still the best way for sending heavy goods, and goods which have to go long distances, but, for short journeys, vans or lorries are useful and quick. Our coal comes by train from the mines to our nearest railway station, where it is weighed out into hundred-weight bags and taken round on a coal wagon or lorry to our houses.

If we send articles of luggage or goods by train, they are collected and taken to the station by the railway vans or lorries, sent to the nearest station and then delivered by motor lorry.

Shopkeepers find motor lorries very useful for delivering their goods. We see all kinds of delivery vans on the road, some of which are quite large. Certain shops, especially greengrocers' and fishmongers', send out vans fitted with shelves to display their goods, so that when the van driver opens the doors at the back, the inside of the van looks like a small shop. Instead of going to the shop and ordering what she wants, mother can go out to this shop-on-wheels and buy whatever she wants.

When we want to move from one house to another, we send for a furniture removal van. Several men come with it, pack all our furniture safely inside, take it to the new house, unpack it, and carry it in for us. Furniture removal is now very much quicker than in the old days when horses were used, and when often two vans had to be sent, instead of one big motor van.

Besides all these there are the big lorries and wagons we see taking timber, petrol, and parts of machinery from one factory to another, and delivering finished articles to the shops.

Section IV—All these motor cars and vans and lorries need men to look after them, men to drive them, and men to repair them when they go wrong. The drivers have to learn to understand the workings of their engines, besides the actual driving,—how to stop and start, how and when to use the brakes, and how to steer. They must watch the other traffic on the

road, and be ready to obey the traffic policeman, or the traffic signal lights, so as to avoid accidents, and they must be able to do little repairs to their engines, or change tyres and wheels when necessary.

If any big repairs are needed the driver takes his car or van to a garage. There he will find mechanics, who can find out what is wrong and put things right. If his engine breaks down altogether when he is out on the road, the garage man comes out to him with a breakdown lorry, to tow the broken car back to the garage for repairs.

We often see motors drive up to a garage, when they have no repairs to be done, to get petrol without which the car cannot be driven. You all know what petrol pumps are like, you see them outside every garage nowadays. Have you ever wondered where the petrol comes from when the garage man turns the handle of the pump? There is a large metal tank buried under the ground, near the pump, which holds the petrol. You may have seen this storage tank being filled by a pipe from a large petrol-tank lorry.

When motors were first invented, spare petrol was carried in tins, often fastened on the step of the car. You know that petrol is what we call highly *inflammable*; that is to say, it easily catches fire. For this reason it is very dangerous stuff to keep in a house, and like matches, it is something you must never play with. You know how fiercely paraffin oil burns in a lamp or stove and how careful mother has to be not to spill any of it in case she might set fire to something, petrol is much more dangerous than paraffin.

Now, you can imagine that there was great danger of fire when tins of petrol were carried on cars, and when garages stored their petrol in tins or tanks, often inside the building.

Nowadays no petrol is allowed to be stored in this way, and petrol pumps are to be found so often along the roads that the motorist needs to carry only as much petrol as his own tank will hold.

Flash Cards.—The following are suggestive of suitable *Flash Cards* for *Picture No 25*:—

1. Peggy and John are out for a holiday
Peggy has been picking flowers
They are on a hill.
The hill is covered with green grass.
2. On the road are many motor cars.
There is a green 'bus
There is a lorry filled with wood
There is a red petrol van
3. In the sky is an aeroplane
The aeroplane has flown over the hills
The men in the aeroplane can see all the motors.
The aeroplane goes faster than a motor car.

Missing words.—Write these words on the blackboard and write the sentences on cards. The children re-write the sentences adding the correct word.—

aeroplane, lines, bank, motors, road

1. Peggy and John are on a high —
2. The bank is on the side of a —
3. Peggy and John watch the —
4. The motors run in two —
5. In the sky is an —.

Reading and drawing.—Write on cards directions for drawing, and distribute the cards among the children —

1. Draw a brown winding road
Put green fields on each side
Put a motor car in the road
Put an aeroplane in the sky.

2. Draw a green tin.

Put a handle on the top
Write "petrol" on the side

Individual reading cards.—This description of *Picture No 25* can be hectographed for children's individual reading —

In the picture you see a country road Peggy and John are on a high bank near the road Peggy and John have been for a walk in the country Peggy has a bunch of flowers John has a long stick.

Peggy and John watch the motors on the road. The motors run in two lines One line of motors runs one way. The other line of motors runs the other way Motors must always run on the left side of the road.

Hundreds of motors run down a busy road in a day. A road must be made hard so that it will not wear away A road is made higher in the middle than at the sides, so that the rain will run off.

You can see a white path by the side of the road in the picture. The path is made for people to walk on. It is not safe to walk in the road

You can see all kinds of motors on the road. There is a green motor 'bus with six wheels There is a brown open car with three men in it. There is a blue closed car A closed car is called a saloon. One green lorry carries poles of wood Another lorry carries boxes. Can you find a motor which carries petrol in a tank?

The road is long It winds away to some hills at the back On each side of the road there are fields and green trees. There are a few houses near the road.

You can see an aeroplane in the sky An aeroplane has the works of a motor The motor inside the aeroplane drives it along

ACTIVITIES AND CONSTRUCTIVE WORK

Classroom project—motor traffic.—The suggestions given under the heading *Road manners* on page 802, will be found to cover a project on motor traffic

Game—"Catching the 'bus.'"—Let all the children, except one, line up by one wall of the playground. The odd child is to be the 'bus driver, and might be provided with a steering wheel cut out of cardboard. He is to stand about two yards away from the line, and when he shouts "Off we go!" he must run to the opposite wall of the playground. The others all run after him, trying to catch the 'bus by touching the 'bus driver. Those that succeed must join on behind the driver for the next run. When six children have successfully caught the 'bus they resume their places in the line and a new driver is chosen.

With a big class, it would be better to have more than one driver at a time.

Plastic model—milestone.—Make the milestone from a ball of white plasticine and print on it with the sharp end of a wooden skewer, as shown in the sketch

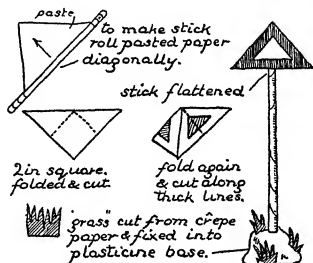


milestone made from plasticine mark lettering with sharp end of skewer.

Paper model—A.A. danger sign.—Make the stick from a 4 in. square of thin brown paper, paste it on the inside and roll it diagonally. Cut the ends of the stick, making it about 4 in. long. Two triangles can be cut from a 2 in.-square of red paper. Fold the square in half diagonally, and then fold again, bringing the folded sides to the middle. (See diagram)

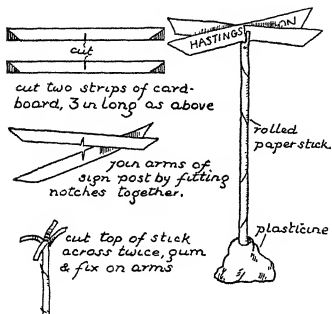
Cut the paper in half along the middle

line as shown; cut out a triangle from the folded side of each portion, leaving a wide border. Unfold the paper and each triangle will be found ready to stick to the post. Flatten the paper stick at the top with the thumb and forefinger, paste the inside of a triangle and slip it over the stick, so that both sides are stuck firmly together with the stick between. Mount the red sign on a lump of plasticine. Grass growing round the base may be made of green crêpe paper. Cut some small squares of paper, snip one side of each and mount them in the plasticine base.



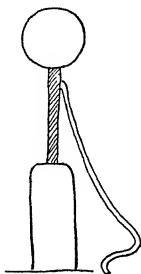
Cardboard model—signpost.—Make the stick from a 4 in. square of thin brown paper, paste it on the inside and roll it diagonally. Then trim the ends of the stick, making it about 5 in. long. Cut one end across twice at right angles, to a depth of about $\frac{1}{2}$ in., thus dividing the ends into 4 strips. Make the pointed arms from two strips of cardboard 3 in. long and print names of towns appropriate to the district. Snip the arms half-way across in the middle, as shown in the diagram, and slip one into the other at right angles, as indicated. Bend out the four strips of the end of the stick, smear the inside of each

with gum, and insert the arms of the sign-post, bringing each strip along the angle between two arms. Mount the whole in a lump of plasticine



Co-operative group model — garage.

— For the garage itself, a shoe box turned on its side would serve, with a cardboard shelf (cut from the lid) fixed across one end for the display of a few plasticine "tools". Outside the garage we can stand the petrol pumps, which can be simply made from a



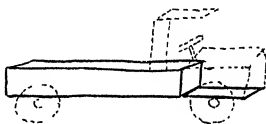
block of plasticine for the base, with a short skewer pushed into it and a flattened ball of plasticine on top for the light. A length of round boot lace can be used for the pipe.

With a foundation made from a match-box tray, with button moulds and sticks for wheels and axles, various kinds of cars and vans can be built up, see page 803. All would require a bonnet fashioned from a flat strip of stiff paper. The steering wheel can be made from a button mould and a stick.

For a touring car, fix a strip of plasticine round the back of the match box and make a plasticine seat.

For a van, cut a strip of stiff paper and fix this over the back of the match box to form the van cover.

For a lorry, use the tray of a Swan Vesta box and stick it on to a slightly longer strip of card, so that the bonnet can be



fixed in front of the tray. Make a plasticine seat and fold a piece of card to form the cab. Drivers and mechanics can be made of plasticine and sticks.

STORIES TO READ OR TELL

FOOLISH MABEL

MABEL wasn't a little girl. She was a nice little motor car—dark grey with bits of shining metal trimming here and there and a neat bonnet. (They do have bonnets, you know.)

She went very nicely indeed, and her

owner was very proud of her. "Mabel's splendid," he used to say. "She really runs by herself, I don't have to do anything."

And Mabel heard him say this so often that in time she began to believe that it was indeed true and that she was quite able to do everything by herself. One day

her owner had gone into a house to see some friends. There was a tiny slope in the road where Mabel stood, and no sooner was he inside than she thought she would go for a little run alone. She started off very gently. "Ah," she said to herself, "I can do it beautifully. It is quite true, I need no one to help me." She went a little faster. She felt very proud, and was only sorry that there was no one to see her, for it was a very quiet street.

Faster, faster—she began to feel a little breathless. "I am going too quickly," she puffed. "I must slow down." But she

Mabel gave a sad little rattle and shed a few petrol tears. She was a pathetic sight, battered and bruised and broken, and oh, so different from her former smart self.

She had to spend a month at a garage-hospital, and she was never *quite* the same after.

But she had learnt her lesson. She never tried to run by herself again.

Rose Fyleman

Speech training.—In order that the children may fully appreciate this story and



found that this was not so easily done, she went faster than ever. The houses whirled past her, everything was a bright jumble.

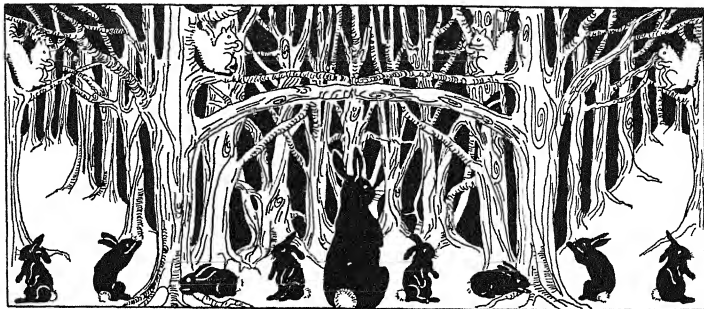
The road made a sharp turn at the bottom, and there was a big iron gate facing her.

"You can't come in here," shouted the gate, rattling all its bars excitedly. "This is private." But Mabel couldn't even hear. She dashed into the gate and crashed right through, and then collapsed in the drive. When she came to herself her owner was standing over her. "Oh, Mabel," he said, "I should have thought you'd have known better."

to give them practice in speaking, the teacher might ask the following questions —

1. What was Mabel?
2. What did the owner mean when he said that "Mabel really runs by herself?"
3. Why did Mabel run away?
4. Why could not Mabel stop?
5. Think of a name for Mabel's owner.
6. Think of a name for the house with the iron gate.
7. Where is a motor-car's bonnet?
8. What is under the bonnet?
9. When do houses seem to whirl past?
10. Where is there a hospital for people?
11. Where is there a garage-hospital?
12. Does a motor-car usually rattle?
13. Why is this motor car called *she*?

BILL'S ADVENTURE



BILL was a countryman who drove a motor 'bus from one village to another. The motor 'bus was his very own, and was really just a van with seats each side. Bill did not have a conductor in his 'bus to give out tickets, he collected the money himself from the passengers as they got out.

One evening Bill was driving home. His 'bus was empty, and as he was not expecting to pick up any passengers, he rattled along the roads at a good rate. Suddenly he thought he heard somebody call, and looking sideways, he saw an old woman in a brown cloak and bonnet standing by the side of the road waving to him.

Bill was surprised to see anyone, for the road had been empty a minute before. He pulled up smartly, and got out to open the 'bus door for her. But before he could put down the steps, the old lady had hustled past him and jumped right in. Bill was astonished to see an old lady jump like that. However, he shut the door after her without saying anything, went to his place and started off again.

He had not gone far before he shouted over his shoulder to the old lady, "Where do you want to get out, madam?"

"Put me down at Rabbits' Burrow," replied his passenger in a voice so young and fresh that Bill turned his head to look at her. And there he saw, not an old woman, but a little girl in a brown coat and hat.

"I must have made a mistake in the dark," thought Bill.

Now there was no stopping place called "Rabbits' Burrow," on the 'bus route so Bill thought he could not have heard aright.

"Where did you say, miss?" he called over his shoulder.

"Rabbits' Burrow!" replied a cackling voice, that made Bill look round again. And there, instead of the little girl, was a brown goose on the seat of the 'bus.

Then Bill knew that he had picked up one of the fairy folk, and though he did not like to have such queer passengers, he thought he had better be careful and polite.

So he answered the brown goose in a pleasant voice, "I'm afraid my 'bus does not go there."

"Oh yes, it does!" cried the voice, more like a bark this time. And when Bill looked round again the goose had changed to a little brown dog.

But before Bill had time to say any more, the steering wheel suddenly twisted round of its own accord and the 'bus went shooting down a little side lane that Bill had never noticed before.

"This is not the way home!" cried Bill, trying with all his might to put on the brake. But the brake wouldn't budge, and in spite of all he could do, the 'bus went faster and faster, twisting and turning of its own accord down the winding lane.

"If we meet anything," thought Bill, "there will be a terrible crash."

And sure enough, round the next corner, there stood a cow right across the road. Bill set his teeth and got ready for the crash, but the 'bus just soared in the air over the cow and came down lightly on the road the other side of her.

"Well!" said Bill

Then the brake suddenly moved of itself, the 'bus slowed down and drew up at the side of the road.

"Rabbits' Burrow!" called out a squeaky voice, and Bill looked round just in time to see a brown rabbit hopping out of the window.

"Fare, please!" he shouted after the rabbit, and something soft and round was thrown at him and fell at his feet. Before Bill had time to see what it was, the 'bus started again by itself and this time rose straight up into the air like an aeroplane.

Bill shut his eyes, for he felt quite dizzy, there was a rush of wind and then a sudden bump. He opened his eyes to find the 'bus standing outside his own home with the engine still running.

After waiting a minute or two to see if anything else was going to happen, Bill drove slowly round to the garage where he kept his 'bus. As he got out he noticed a bunch of cowslips tied with brown ribbon lying on the floor near his seat. It was the queer passenger's fare.

Bill took home the cowslips and put them on his supper table. But he never told anyone about his adventure, because

he was afraid if he did nobody would ever travel in his 'bus again.

Kate Lay.

THE TERRIBLE TWINS

PETER and John were twins. Mother called them the "terrible twins" because they were always getting into mischief. They didn't mean to be naughty, but it seemed as if all their plans went wrong somehow and ended in what mother called "mischief."

They had a kitten called Mops, and one day, when Mops was very tiny, she was chased by a big dog and ran up a tree out of his reach. Once up the tree she got frightened and couldn't get down, but stayed there mewling piteously. Peter and John were very sorry for her and tried to think of a way to help her.

John said to Peter, "If I stood on your back, I think I could reach that lowest branch."

So Peter stood by the tree, while John climbed from his back up to the branch and so was able to work his way up the tree towards Mops. But he made such a noise and shook the tree so much, that Mops got still more frightened and forgot she couldn't get down, and began scrambling and tumbling down the tree, and was soon safely hidden in the tool shed. There was John left to think how *he* could get down.

He found it was not half so easy as climbing up, but at last he managed to slip and scramble down to the bottom branch and so drop on to Peter's waiting back.

Then they went to tell mother all about it. But, oh dear! oh dear! There were nasty, dirty foot marks all over the back of Peter's clean shirt, and John's trousers were torn in half-a-dozen places. More mischief!

Another day they heard cook complaining that her knives wanted sharpening, so they thought they'd help her. They had seen

daddy sharpening his tools on a grindstone and they thought that would be fine fun! Unfortunately their "sharpening" quite ruined the knives, and Peter managed to get a bad cut on his thumb *More trouble!*

One way and another they really *were* terrible twins, and mother declared they were more trouble than a dozen children.

Then one day an awful thing happened. It was like this —

The twins had an uncle of whom they were very fond, and Uncle James had a very fascinating motor car. I don't know which they liked best, Uncle James or his car.

Well, one day Uncle James came in his car to visit them, and, as usual, the twins were wildly excited, especially when Uncle James let them sit beside him while he took them for a ride. He had to explain to them what all the knobs and levers were for, and exactly how the engine worked.

Then they all went home to tea. After tea the grown-ups sat round the table talking, as grown-ups do. Peter and John got very bored and at last asked mother if they could go to play.

"Yes, dears, but don't get into mischief," said mother, and she went on talking to daddy and Uncle James.

When they got outside, Peter said to John, "Let's go and sit in uncle's car and pretend we can drive it."

"Good idea!" said John, and off they went. They sat in the car for awhile, taking

it in turns pretending to drive, holding the wheel and touching all the knobs and levers in turn, not intending any mischief at all.

Now, I ought to tell you, that the twins lived in a house nearly at the top of a rather steep hill, and while they were playing in the car outside the house, Peter accidentally pushed over the brake lever, and before you could say "Jack Robinson" the car began to move down the hill, faster and faster.

"Stop it! stop it!" shouted John, but they were both so frightened they couldn't remember what to do, and down they went faster and faster.

Now there was a large and muddy pond at the bottom of the hill, and the road curved round to avoid it, but John and Peter had by this time completely lost their heads, and instead of steering the car round the bend, they drove straight into the middle of that muddy pond.

The car stuck there, and the muddy water flowed in, all over the floor of Uncle James's nice clean car.

Peter looked at John, and John looked at Peter, but neither could think of anything to say.

In the end they pushed open the door and waded out through the nasty sticky mud. (Of course, they had their best suits on!)

You can just imagine what mother and daddy and Uncle James had to say to them when they got home!

E. Bioletti.

RHYMES AND POEMS

THE MOTOR CAR

Motor car, motor car, where have you been?

"I've been to London to see the Queen."

Motor car, motor car, what did you do there?

"I saw the Guards with hats made of hair."

Inflection — Little rhymes of this kind are useful for helping children to read and recite with proper inflection of the voice. The rhyme should be written on the blackboard or on a card, and the children should be led to observe the question marks and quotation marks. One child then asks the questions and another answers them.

WHAT DOES THE BEE DO

THE SCISSOR-MAN

(This rhyme is set to music on page 789.)

(This poem is set to music on page 790.)

What does the bee do?
Bring home honey.
What does father do?
Bring home money.
And what does mother do?
Lay out the money.
And what does baby do?
Eat up the honey.

Anon.

Reading preparation.—This is a useful rhyme for reading preparation. After the children have learnt the rhyme they can act the parts of the bee, father, mother and baby. Some children can pretend to be bees, and gather honey from flowers and put it in a suitable box for a hive. Those children acting the part of father can choose their own occupation, go to work and bring home money for mother. Mothers can go shopping, while babies are left in the charge of other children who give them bread and honey for tea.

Let the children represent in drawing their own ideas of the rhyme.

Print the rhyme in phrases on the black-board. The children will soon recognise most of the words.

For a matching game print words on cards. Two sets of phrases can also be prepared for matching: *bring home honey; bring home money, lay out the money; eat up the honey.*

A further stage is to write sentences on *Flash Cards*—1. The bee gets honey. 2. The bee brings honey home. 3. Father goes to work. 4. Father gets money. 5. Father brings home money. 6. Mother goes to the shop. 7. Mother lays out her money. 8. Mother buys tea with her money. 9. The honey is for baby. 10. Baby likes honey. 11. Baby eats up the honey

Sing a song of Scissor-men,
"Mend a broken plate,
Bring your knives and garden shears,
I'll do them while you wait.
Buzz-a-wuzz! Buzz-a-wuzz!
Fast the wheel or slow,
Ticker Tacker! Ticker Tack!
Rivets in a row."

Sing a song of Scissor-men,
Sitting in the sun,
Sing it when the day begins,
Sing it when it's done.
Be it hard or be it soft,
Here's a jolly plan;
Sing to make the work go well,
Like the Scissor-man.

Madeleine Nightingale.



Articulation—"s" and "t"—There are a number of sibilant sounds in this poem, indeed, the whole poem is intentionally built up on sibilant sounds in order to convey the sound of the grindstone. The recital of the poem will afford good practice for children who are unable to speak the s sounds clearly. Note, too, the t in such words as *wait, Ticker Tacker, rivets, soft.*

Rhyming words.—Let the children suggest lists of rhyming words which can be written in their *Word Books*:—

1. *plate, date, gate, mate, Kate.*
2. *slow, row, bow, flow, mow*
3. *sun, bun, fun, gun, run.*

DO YOU EVER?

I'm walking up and down the hall,
 My shoes a happy squeaking make,
 It is a lovely noise! I hope
 It's not because my new shoes ache.
 I walk to hear it when I can,
 Turning my toes out, like a man.
 When I have children, I shall buy
 The squeakiest shoes that I can find
 And walk about the house, my hands
 Clapsed close together tight behind.
 And when my children hear, they'll say,
 "Here's Daddy coming home. Hurray!"

Flora Sandstrom.



Note.—In this poem the child pretends that he is grown up like father and wears very squeaky boots. 1. Why does the child want to be grown up like father? 2. How does the child walk? 3. Do you like squeaky shoes? 4. This poem swings along at a steady walk. Say it walking up and down like the boy in the poem. 5. How can you tell there is a bee in the room when you cannot see it? 6. How can you tell when there is a mouse in the cupboard? 7. How can you tell that a train is coming when you cannot see it? 8. What work does your father do? 9. How do you know when he is coming home?

THE CHOICE

I
 Met a Lancer;
 The Lancer said to me,
 "Master—Master—what would you like to be?"

I
 Looked at the Lancer,
 Terrible, tall and trim,

And told him that I'd like to be
 Him, Him, Him



I
 Met a Plumber,
 The Plumber said to me,
 "Mister—Mister—what would you like to be?"

Look at the lot of tools I've got—
 You'd like the same, I guess?"

I
 Looked at the lot and said,
 "Yes, Yes, Yes!"



I
Met a Sailor;
The Sailor said to me,
"Cheer-o, Hero, what would you like to be?
It's hard to be a Bos'n tight,
But wouldn't you like to try?"

I
Said, for he must be right,
"Aye, Aye, Aye!"



I
Met an Air-man;
The Air-man said to me,
"Hey, Boy! Say, Boy, what do you want
to be?"



A Pedlar or a Pirate-King,
A Follow-me-lad, or Who?"

I
Bowed my head
To him and said,
"You, you, you!"

Jfrida Wolfe.

MOTORIZING

I've been for a ride
In our lovely new car,
Out into the country—
Oh, ever so far!

It has round silver lamps
And big shiny wings
And a dashboard all covered
With dials and things

They tell you the speed
And the miles that you go,
And they warn you in time
If the petrol runs low.

The windows won't break,
Though they look just like glass,
And the horn says politely,
"Will you please let me pass?"

And out on the road
We go sailing along,
While the engine just murmurs
A soft sleepy song.

When we're safe through the town
I love to go fast,
While the trees and the hedges
Rush dizzily past

Or go softly through woods
And narrow deep lanes,
That nobody knows of
Who travels in trains.

Then, on the way home,
Though the night may be black,
The lamps spread before you
A broad gleaming track.

And often you'll see
The bright startled eyes
Of rabbits and wild things
You've caught by surprise.

Oh, when I'm grown up,
With a car of my own,
I'll never be greedy
And drive all alone,

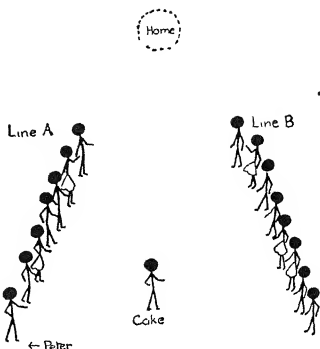
But I'll ask all my friends
To come riding with me,
And go right away down
To the beautiful sea!

T. Mark.

Game—"Peter and the Christmas Cake".
Two lines of children, A and B, stand facing each other at a distance of a few yards apart. A ring is chalked on the floor at a place equally distant from the two lines. This ring is the *Home*,—see sketch. The lines take turns to sing the song given below

To begin the game, two children are chosen from line A, one is Peter and one is the Cake. Peter decides on the price of the cake and whispers it to the Cake and to the other members of line A. Little ones may give a price in pennies, while the older children may be allowed to choose any sum from a penny to two shillings, using half-pennies and farthings.

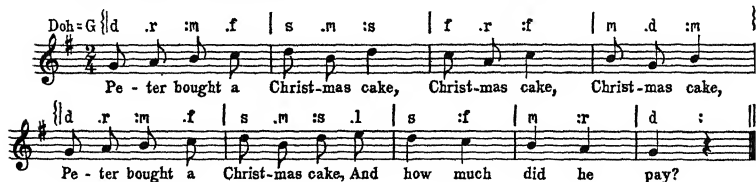
The Cake then takes up a position in the middle between the two lines, and the



children of line A take hands and alternately advance and retire, facing line B, singing:

Peter bought a Christmas Cake,
Christmas Cake, Christmas Cake,
Peter bought a Christmas Cake,
And how much did he pay?

The children in line B guess the price in turn, beginning at the end of the row. Peter says "No" to each wrong answer. When the correct price is given, Peter and line A shout "Yes!" The Cake then runs to *Home*, chased by all the children in line B, except the one who called out the correct price and who becomes Peter. The child who catches the Cake takes his place, and the next time, line B sings the song and line A does the guessing.



SONGS

WHAT DOES THE BEE DO?

ANONYMOUS

PERCY G. SAUNDERS

Doh=F

SOLO $\{ \dot{d} . r : d . r | m : d |$ **FULL** $m : r | d . d : - \}$

What_ does the bee do? Bring home hon-ey.

SOLO $\{ \dot{d} . r : d . r | m . m : d |$ **FULL** $m : r | d . d : - d |$ **SOLO** $m . f : m . f | s . s : m \}$

What_ does_ Fath-er do? Bring home mon-ey. And what_ does moth-er do?

FULL $\{ s : f . f | m . m : r . m |$ **SOLO** $f : s | l . l : f |$ **FULL** $m : r . r | d . d : ||$

Lay out the mon-ey, And_ what does ba-by do? Eat up the hon-ey.

THE SCISSOR-MAN

MADELEINE NIGHTINGALE

PERCY G. SAUNDERS

Doh = G ♩ m ., f : s .s | m .d : d }

Sing a song of Scis - sor - men,
Sing a song of Scis - sor - men,

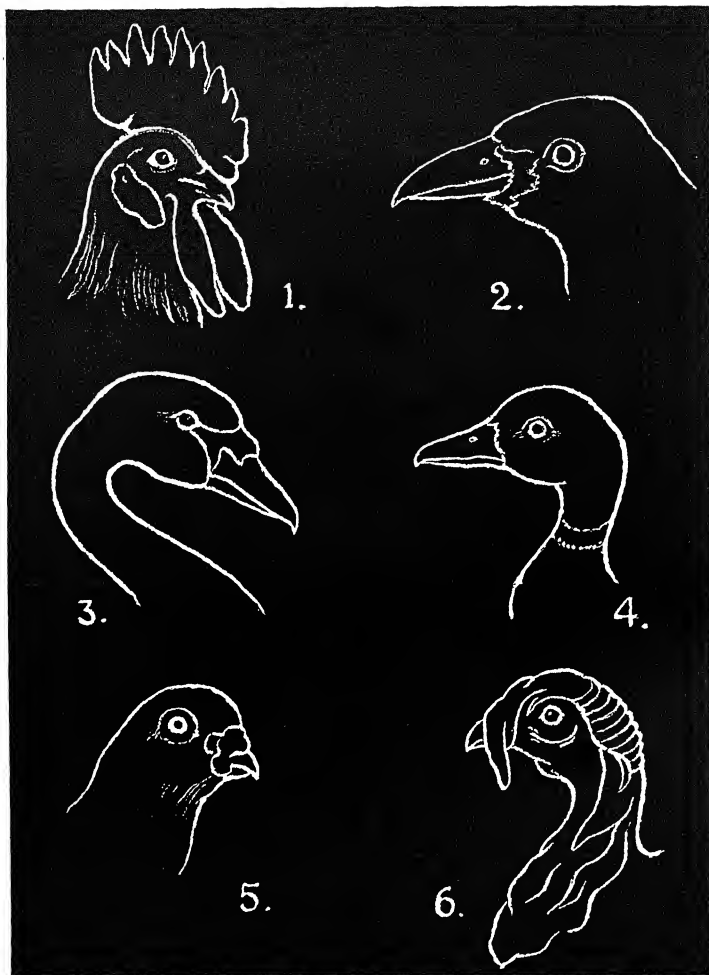
"Mend a bro - ken plate, Bring your knives and
Sit - ting in the sun, Sing it when the

gar - den shears, I'll do them while you wait. ____
day be - gins, Sing it when it's done. ____

|| d .s, :d | d .s, :d |
 Buzz - a - wuzz! or Buzz - a - wuzz!
 Be it hard, or be it soft,

|| m .,f :s .m | r :- | l .l :s .s |
 Fast the wheel or slow, Tick - er, Tack - er!
 Here's a jol - ly plan; Sing to make the

|| f .m :r | m .,f :s s | d :- ||
 Tick - er, Tack! Riv - ets in a row!
 work go well, Like the Scis - sor - man.



HEADS OF BIRDS

1 COCK
4 DUCK

2 ROOK
5 PIGEON

3 SWAN
6 TURKEY

CENTRE OF INTEREST— MEN WHO HELP US

XXI. THE POLICEMAN



THE POLICEMAN ON HIS ROUNDS

Drawing in Outline of Picture No 26 in the Portfolio

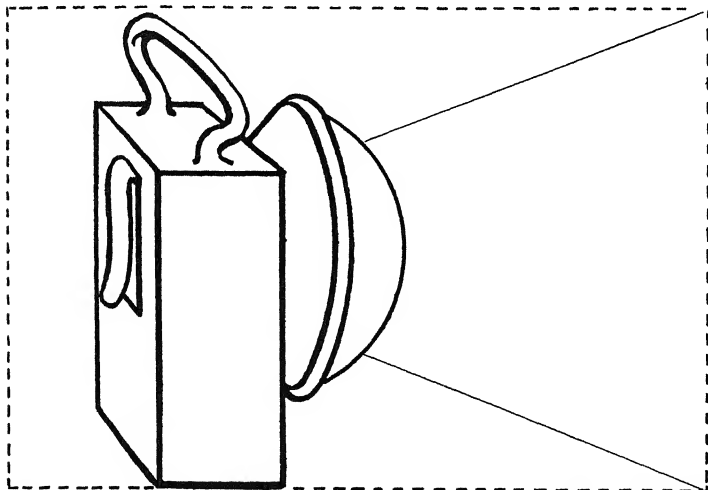
Description of Picture No. 26.—Here we see the policeman on his rounds after dark, accompanied by a police dog. The scene is a street, and the policeman is trying a shop door to see that it is securely fastened. He directs his flash lamp to the door and turns the handle. The dog is a brown Airedale terrier, a fierce and intelligent breed, often trained to assist the policeman at his work.

All children are familiar with the appearance of a policeman in his blue uniform, with long double-breasted coat, leather belt and helmet. Many will have noticed a policeman's truncheon and flash lamp.

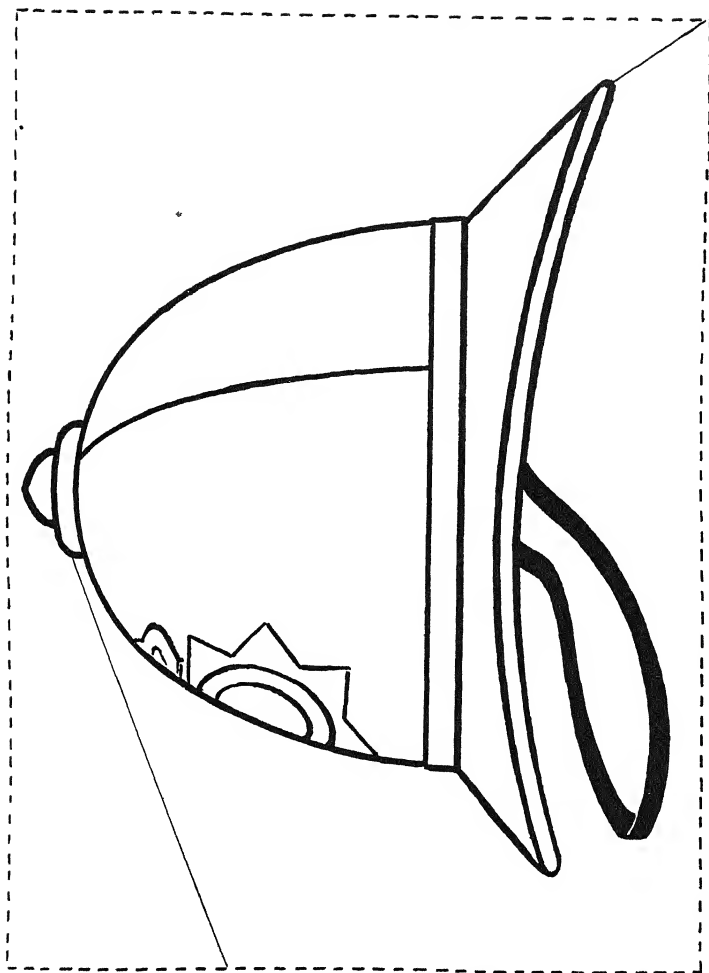
In certain towns there are police boxes, one of which is shown on the left of the street in the picture. These are a little larger than telephone boxes, and contain a shelf with a telephone, a stool and an electric fire. The police call in these boxes at intervals on their rounds during the day

and report to the police station. At night a blue light burns outside the box, as shown. The boxes are accessible only to the members of the police force, but an emergency telephone to summon the Fire Brigade, Ambulance or the Police is installed outside for public use.

The frieze below the picture shows a policeman's flash lamp shining on his helmet. Trace-outs of the units of the frieze are given on this and the next page. Half the number of children will require whole sheets of drawing paper with a tracing of the helmet, while the others will need half sheets with a tracing of the lamp. Let the children colour their segments as shown in the Picture, first giving the paper a water wash. They can then cut round the outlines of their shapes, or along the dotted lines, and paste the segments edge to edge on the back of a strip of wall paper. If preferred, the light from the lamp may be coloured afterwards.



TRACE-OUT FOR FRIEZE—FLASH LAMP
Trace this Drawing for part of the Frieze, Picture No. 26.

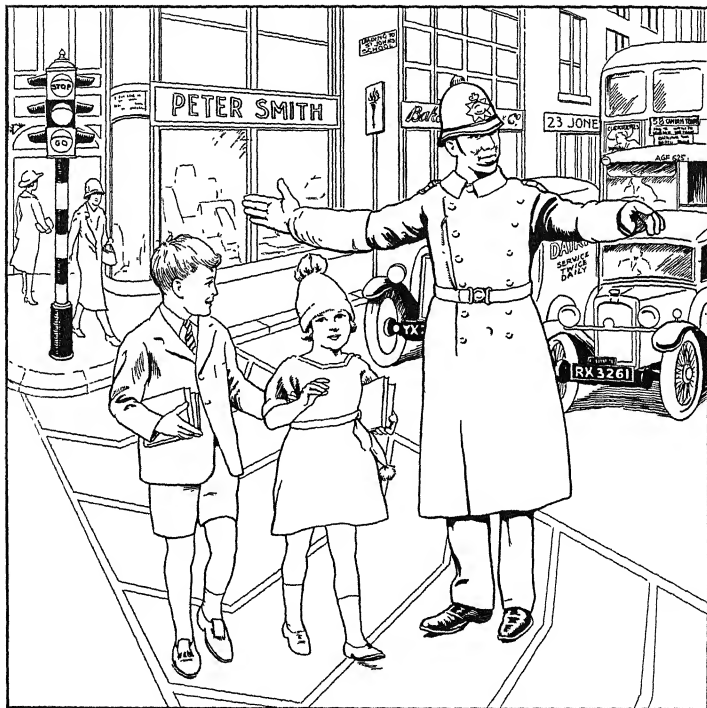


TRACE-OUT FOR FRIEZE—POLICEMAN'S HELMET
Trace this Drawing for part of the Frieze, Picture No. 26

LANGUAGE AND SPEECH TRAINING

Conversation on Picture No. 26.—The children should freely describe and discuss the picture. To stimulate thought and observation and to bring to the notice of

the children any points overlooked, the teacher may make some of the following suggestions.—1. What is the name of the man in the picture? 2. What is the colour of a



ROAD SIGNS

Drawing in Outline of Picture No. 60 in the Portfolio.

policeman's uniform? 3. Tell what a policeman wears on his head. 4. Tell what a policeman wears round his waist. 5. Tell about what time it is in the picture. 6. Tell what the policeman is doing. 7. Outside what kind of a shop is the policeman standing? 8. Why does the policeman try the door? 9. Give a name to the police dog. 10. Find the policeman's box. 11. Tell what is in the border under the picture

Talks to the children.—

Section I.—Let us pretend that we are going shopping in a big town, and the shops we want to visit are on the other side of a busy street. How can we safely cross this street? We will walk along till we come to a policeman regulating the traffic. When he holds up his hand all the cars, 'buses and horses have to stop till he waves them on again, and while they are held up we can safely cross the road. How can we tell a policeman when we see one? By his uniform. Tell all you can about his uniform. (Get the children to state the colour, and to mention buttons, helmet, badges, etc.)

What does a traffic policeman wear that is different from other policemen? White gloves and armlets. We must always be very careful to watch the policeman's hand when we want to cross the road.

Is there anything else that will help us to cross roads safely? The automatic traffic lights that are put up in different places. (Show the *Class Picture No. 60* in the portfolio)

We must learn all about traffic signals if we want to be safe when we are out-of-doors. The top light is red for danger. It says "Stop," so all cars and people going in that direction must stand and wait. When the red goes out, an amber light shines for a few seconds. The amber light tells us to be careful. Then the green flashes on, green for safety, and we can safely cross the road while the other stream of traffic waits for us. In some towns there are special crossing places for people to

get safely over the road. If you want to cross by one of these, the traffic will wait till you have passed

Section II.—Besides helping us to cross roads, policemen do many other things for us. A policeman is a friend, and we can ask him anything we want to know and he will help us and take care of us in any way he can. You need never be afraid if you cannot find your way home. Speak to a policeman and tell him your address and he will take you home. If you are taking a message for mother and cannot find the street or house you want, any policeman will be glad to direct you. (Opportunity should be taken on many occasions to see that every child can tell plainly where he lives)

The policeman will not only look after us, but he will look after lost animals also. If you should lose your dog, the best place where you could look for him would be the Police Station. There you would most likely find him in one of the kennels the police keep for stray dogs. In the country, policemen sometimes have to take care of stray horses or sheep or cows.

What would you do if you found a purse or a glove, or an umbrella? Take it to the nearest policeman and he will leave it at the Police Station till the owner comes to enquire for it

At night, policemen patrol the streets, trying shop doors and house doors to see that every building is safely locked up and that no thieves are about. If a policeman finds a man trying to get into a house or a shop to steal, he will take him to the Police Station and lock him up

A policeman has to be able to help in case of accidents. He has had lessons in First Aid, so that he knows what to do if people get hurt in a car smash, or by falling off a bicycle, or are run over in the street.

Then he has to be ready to call the Fire Brigade in case of fire, and he may have to help the firemen. He is always on the look out for chimneys on fire, and he warns

people if he sees one, in case it should lead to a real fire

If a policeman on his beat sees a child in very ragged clothes or without proper shoes he will make a note of it, and find out whether the child's parents are too poor to dress him properly. If so, then the police will find proper clothing for the child. This is something the police do on their own account. They have a special fund for the purpose; it is not part of their regular duties.

How do the police go about their work? Mostly they walk, but sometimes they use bicycles if they have long distances to cover. Sometimes they ride horses. These men are called Mounted Police. You see Mounted Police helping to control the crowds when there is a procession. Police also use motor cycles and motor cars and sometimes even aeroplanes.

In all these ways our friend the policeman works for us, guarding us and helping us in every way he can.

Section III.—Many, many years ago, before there were horses and roads and towns, men had very few possessions and had no need for anyone to guard them. They hunted and fished with spears which they could carry with them wherever they went, and their clothes were the skins of the wild animals they killed. They moved about wherever there was good hunting, and they had no settled home. But as time went on men began to build themselves huts to live in, and to keep flocks of sheep, goats, and cattle. Then, instead of each man doing everything for himself, one would be a potter and make all the cooking pots of clay dried in the sun, another would spin the wool from the sheep, and another weave it into cloth. Then men began to need someone to guard the sheep and cattle from wild beasts, and from other men who might try to steal them.

After long years, towns grew up and some men became rich through buying and

selling cloth, food and weapons. Then there were thieves ready to steal these riches, so Watchmen were appointed to patrol the streets at night, to keep away thieves, and to see that noisy people did not disturb those who wanted to sleep.

For many years these Watchmen were the only kind of police, and there were not enough of them to be of real use, so about a hundred years ago a man named Sir Robert Peel started what we now call the Police Force. He enrolled a number of men, gave them uniforms, and made them drill and learn their duties, and then sent them out to get rid of all the thieves and to take care of all the people in London. After a time policemen were sent out all over the country, just as we find them to-day. You have heard policemen spoken of as "Bobbies." That is a nickname given to them when they were first enrolled by Sir Robert (or "Bobby") Peel. Sometimes, too, policemen were called "Peelers."

Nowadays there are many more police than there were then, for they have so many kinds of work to do for us

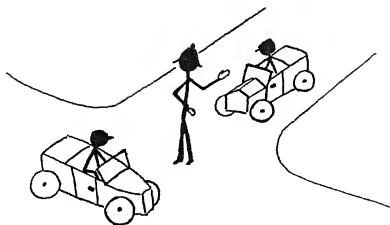
Section IV.—How do you think a policeman learns all the different kinds of work he has to do? He goes to school as you do, but of course, his lessons are different from yours.

Some policemen go to school all day for some weeks till they can pass an examination and are ready to start work. Others spend part of the day at school and part at work in the Police Station or on a beat, and then they have to do homework as well, like some of your elder brothers and sisters.

They have special classes to learn ambulance work, bandaging, and how to stop bleeding, and what to do to burns and scalds and things like that. They have to learn what to do in case of fire and how they can help the fireman.

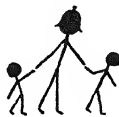
Policemen have to learn how to direct the traffic and they must know quite a lot about motor cars, because they often have

The Policeman.



Here is a Policeman on traffic duty.

This Policeman is taking home
two little boys who have
lost their way



This little girl is asking her way to
the park. The Policeman points
the way she must go.

Here are some Policemen
doing their drill.



to find out the cause of an accident. Of course they need to know all the names of the streets in their own town and where all the roads lead to.

They have to drill, just as soldiers do, for they must always be strong and look smart, and be able to walk long distances. If a policeman works hard and passes the proper examinations, he may become a sergeant and then an inspector or even a superintendent

Flash Cards.—The following are suggestive of suitable *Flash Cards* for *Picture No. 26*.—

1. The policeman has a blue coat and hat.
His coat is called a uniform.
His hat is called a helmet.
He has a belt round his waist.
2. The policeman has a flash lamp.
It is a dark night.
The policeman flashes his light on a door.
He tries the shop door.
3. The policeman has a dog.
The dog is called an Airedale.
It is a big, strong dog.
The dog is the policeman's friend.
4. There is a police box in the street.
In the box is a telephone.
We can call the police with the telephone.
We can call the fire engine with the telephone.

Missing words.—Write several sentences on the blackboard, or preferably on cards, and let the children rewrite the sentences adding the missing words:—

1. The policeman wears a blue — (coat).
2. He has a — (helmet) on his head.
3. From his belt hangs a — (flash lamp)
4. Every evening he goes down the — (street).
5. He turns the — (handle) of each door

- 6 The policeman takes his big brown — (dog) with him.
- 7 The little hut is a police — (box).
- 8 Every policeman has a — (key) to the police box.

Number.—Write the following sentences on the blackboard or on cards with the number-words omitted, and let the children supply the missing words with reference to *Picture No. 26* —

1. In the border under the picture there are — (five) helmets and — (five) lamps.
2. In the border there are — (ten) things altogether.

Individual reading cards.—This description of *Picture No. 26* can be hectographed for children's individual reading:—

The picture shows a street with shops. It is late in the evening. The shops are all shut.

Look at the tall policeman in his blue coat and helmet. He wears gloves and a leather belt. From his belt hangs a flash lamp. He turns on the lamp when he wants to see in the dark.

Late every evening the policeman goes down the street. He looks at all the shops to make sure that the doors are shut. He turns the handles to make sure that the doors are locked. All shop keepers must lock their doors in the evening, so that thieves cannot get in to steal the goods.

The policeman takes his dog with him on his rounds. The dog is big and brown, with shaggy hair. The dog is strong and clever. He is trained to do useful work, so that he can help the policeman. This dog can catch a thief and hold him down till the policeman comes.

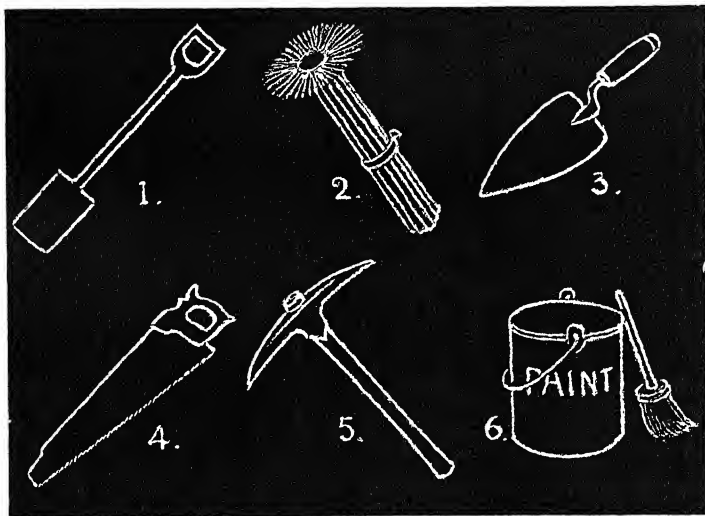
Look at the little hut on the other side of the street. It is like a telephone box, only this hut is bigger. The hut has a lamp outside. The lamp burns all night. This hut is a police box. You will find police boxes in many towns

Every policeman has a key to the police box. When a policeman comes to a police box, he uses his key and goes in.

Inside the police box is a telephone. With the telephone the policeman speaks to a man at the police station. The policeman tells where he is. He tells what he has done. He tells what he has seen. In this way the chief man at the police station hears all that happens in the town.

Tools of "Men who help us."—Draw on the blackboard sketches of the various tools

used by different workmen, and let children tell to whom the tools belong. Some tools, such as the spade, are used by several kinds of workmen. It is likely that some of the children's fathers will be the workmen referred to, and this fact will add to the interest of the talk. The children can suggest the names of other tools associated with particular workmen, and they can be encouraged to draw the tools on boards or in their books. The names of the tools should be written under the drawings, and the best copies can be added to the *Scrapbook Dictionary*.



TOOLS OF MEN WHO HELP US

- 1 GARDENER'S SPADE
4 CARPENTER'S SAW

- 2 SWEEP'S BRUSH
5 MINER'S PICK

- 3 BRICKLAYER'S TROWEL
6 PAINTER'S KETTLE AND BRUSH

ACTIVITIES AND CONSTRUCTIVE WORK

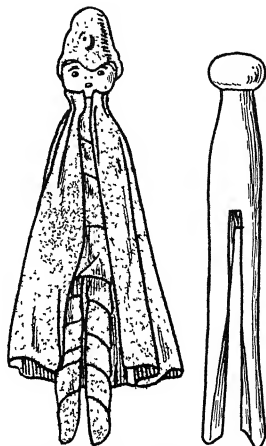
Classroom project—road manners and Safety First.—The understanding of and co-operation with the rules of Safety First on the road are so important, that, while these notes are primarily for the use of the teachers who wish to employ the Project Method with their children, every teacher will find some form of this particular activity applicable and instructive.

In this connection the children will plan out a system of streets, probably reproducing certain main thoroughfares in their own town. They may make a group model and move model motors as described later in this section, or mark out the street system in the playground with chalk. In the latter case certain large buildings can be represented by boxes, and traffic signals, if any, can be set up. The children may merely pretend to be certain vehicles, or they may bring toys to ride. Some sort of rough toys on wheels can usually be procured, while children without them can act as policemen and pedestrians.

While playing, the children must observe every rule of the road; e.g., hooting or ringing at corners, the various hand signals made by drivers, looking both ways before stepping off the pavement, etc.

Model with odds and ends—policeman.—Take a clothes peg with a round head and draw or paint a face on the side of the head directly above the slit. Cut two long narrow strips of blue crêpe paper, paste the ends and wind one round each leg of the clothes peg. Cut a wider strip of paper, paste each end and wind it round the body of the peg, beginning at the neck and continuing down to cover the tops of the trousers. Cut a square of similar paper, paste along one edge and gather it up round the neck of the peg to form a cape.

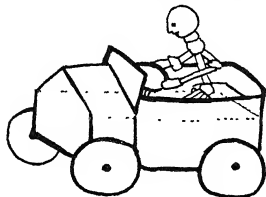
Make a policeman's helmet of blue plasticine to complete the figure.



Co-operative group model—street scene.—Houses can be made of match-box covers wrapped with a strip of paper bent to form a roof to which a paper chimney may be added. The houses can be appropriately coloured, some to represent shops and some private houses. The pavements can be made of flat bricks or strips of paper.

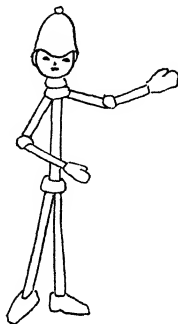


Match-box trays will provide a foundation for motor cars. A flat piece of plasticine shaped to a point will form the radiator, a flat strip bent over this makes the bonnet; while another strip folded round the box forms the body of the car. A thin roll of paper or plasticine bent to shape indicates the windscreen, and a flattened plasticine block the seat. A stick with a button mould or a disc of plasticine will make the steering wheel, and the wheels can be button moulds on stick axles, or merely discs of plasticine stuck on the sides.



The policeman on point duty can be fashioned from sticks held together with plasticine; the head, hands, feet and helmet being made of plasticine. Similar figures

can be made for car drivers and pedestrians. The model should be arranged so as to show one stream of traffic being held up and one stream passing the policeman. At another set of crossroads the children can



construct a traffic signal, made from a small box or block of clay or plasticine on a stick. On this they may stick discs of red, green and amber paper, arranging the traffic to obey the signals shown.

STORIES TO READ OR TELL

THE POLICEMAN WHO WASN'T AFRAID

THERE once lived a policeman who boasted that he was never afraid. He was a fine, big man with a red face.

All the village people were tremendously proud of their brave policeman. The little girls all smiled at him, the little boys touched their caps, and the grown-ups said, "Good morning, Constable," as he went by.

Once the policeman was walking on a bridge over a river, when a cat fell into the water. The policeman at once jumped

in and pulled her out. The cat's master came to thank him.

"How brave of you!" he said. "You might have been drowned."

"Oh no!" replied the policeman. "Water doesn't hurt me. I'm not afraid of anything."

Soon after an old lady's cottage caught fire. The policeman rushed in, wrapped the old lady in his coat and carried her out.

The old lady thanked him over and over again.

"It was so brave of you," she said, "you might have been badly burnt."

"Oh no!" replied the policeman. "A fire does not worry me. I'm not afraid of anything."

Another time two fierce thieves were stealing in the village. The policeman kept watch at night, caught both the thieves and marched them off to prison.

"You are a brave man," said the magistrate, "to face two thieves alone."

"Oh no!" said the policeman, "I should not have minded if there had been twenty thieves. I'm not afraid of anything."

The policeman said this so often that in time the villagers began to say it too.

"What a wonderful man our policeman is!" they used to remark as he passed on his beat. "He's not afraid of anything, you know."

The policeman lived in a smart cottage, and a servant girl came each day to cook the dinner and clean the rooms. One day at dinner there was a terrible thunderstorm.

"Oh! Oh! I'm frightened!" cried the servant girl, as the thunder crashed overhead.

"You silly girl," said the policeman, "you should try to be more like me. I'm not afraid of anything."

Now the servant girl could hardly believe this, and she made up her mind to find out if it was really true. She felt sure that there must be *something* that the policeman was afraid of. She knew that he was not afraid of water, or fire, or thieves, or thunderstorms, so she tried to frighten him with other things. She caught a huge spider and put it in his hat; she put a worm in his pocket and a caterpillar in his gloves; but the policeman wasn't a bit afraid. She crept out one dark night and made funny noises under his window, but he told her to go home to bed. At last the servant girl began to think that what the policeman said was really true,—he wasn't afraid of anything.

Then one day the policeman called her and told her that he was going to be moved to the next village, so that she would not be his servant girl any more.

The servant girl was so sad to hear this that she began to cry. At that, the policeman, instead of speaking kindly to her, got up and went straight out of the cottage. This hurt the feelings of the servant girl, and when the policeman came home that evening she went to him and said, "You were very unkind, Constable, to leave me so suddenly when I am unhappy because you are going away." And she began to cry again.

But still the policeman did not say anything. And when the servant girl looked up through her tears, there he was just going out of the door, his big face quite white.

"Why," cried the servant girl, "I believe you're afraid!"

"Well, yes, I am," replied the policeman, hanging his head. "I never could bear to see anyone cry."

The servant girl was so pleased to have found something that the policeman was afraid of that she began to laugh instead of crying. And so that she should not cry any more, the policeman asked her to be his wife, and they went away to the next village together.

And now, whenever the policeman begins to boast and say, "I'm not afraid," his wife takes out her handkerchief and wipes her eyes, and he stops at once.

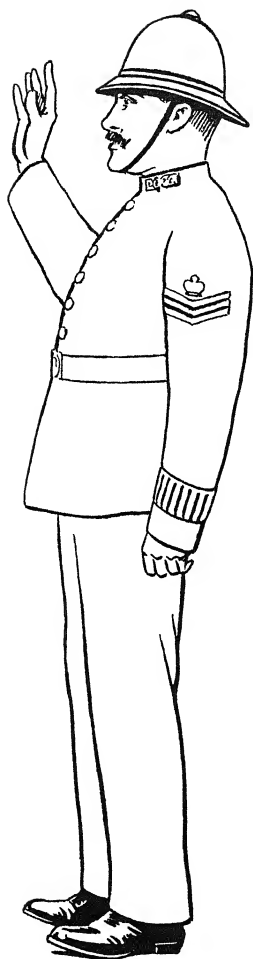
Kate Lay.

BOBBY AND THE POLICEMAN

THIS is the story of a little boy named Bobby, who was afraid of policemen. He always held tightly to his mummy's hand when they passed one in the street.

His mummy was very worried about it, and told him not to be so silly. But it was no good, Bobby couldn't help being afraid.

One day Aunt Janet came to tea. Now Aunt Janet was Bobby's favourite aunt. She knew some jolly games to play, and she could tell the loveliest stories.



TRACE-OUT OF THE POLICEMAN FOR THE CHILDREN TO COLOUR

Mummy told her all about Bobby being afraid of policemen. Aunt Janet nodded her head and said, "I think I've got a plan. You leave it to me, but don't let Bobby know that you've told me."

A few days later, Bobby was greatly excited. The postman brought him a letter from Aunt Janet. "Dear Bobby," it read, "Will you ask mummy if you can come on Saturday and stay with me for a week? We can have such jolly games, and I've a white puppy for you to play with, so be sure to come. If mummy will put you on the train I will meet you at the station here. Your loving Aunt Janet."

When mummy said that Bobby could go, he began to pack up his clothes at once. He thought that Saturday would *never* come! But at last he found himself in the train, with his ticket clutched tightly in his hand and his suitcase on the rack. He felt very proud to be travelling alone for the first time.

Mummy kissed him good-bye, the guard waved his flag and they were off. It was only about twenty miles to Aunt Janet's home, but it was a wonderful journey to Bobby. The guard came and spoke to him at every station, so that he was not lonely. At last the train pulled in to Oakfield Station and there was Aunt Janet waiting for him on the platform.

Aunt Janet lived in a little cottage with a big garden and orchard, so Bobby knew he would have a fine time here, he could think of so many games he wanted to play.

Aunt Janet's puppy, Rex, made a jolly playfellow and each day he and Bobby went out as soon as breakfast was over, and, except for meals, did not come in again till bed time.

Then one day Aunt Janet said, "I have an invitation to tea to-day for you and me, Bobby. My friend Mrs. Robinson makes most delicious bread and cakes, and her husband keeps rabbits and pigeons and chickens, so I think you will enjoy the visit."

Bobby thought he would rather stay and play with Rex, but he did not want to be rude to Aunt Janet, so he said he would like to go.

In the afternoon they set off across the fields to the next village, about a mile away. It was a sunny day and Bobby had a good time watching the birds and butterflies, and looking out for wild strawberries in the hedges.

Soon they came in sight of the cottage, and there was Mrs. Robinson standing at the gate watching for them. Bobby thought he'd never seen a garden so full of flowers. You could hardly see the cottage, it was so covered with roses and honeysuckle, and Bobby felt very glad he had come.

Mrs. Robinson greeted them gaily and led the way into the cottage, and there was tea all ready for them.

"I'm sure you must be hungry, my dear, after that long walk," said Mrs. Robinson to Bobby. "Sit down there by Mr. Robinson and after tea he'll take you out to see his rabbits."

Bobby had a lovely tea and Mr. Robinson made him laugh, telling him all the funny things his pets sometimes did. After tea they went out into the garden and fed the rabbits and the pigeons and the chickens. Mr. Robinson answered all Bobby's questions and told him many interesting things about his pets. The pigeons came and perched on his head and shoulders and some of them even came and fed out of Bobby's hand. Bobby decided that Mr. Robinson was quite the most interesting man he had ever met.

After a while Mr. Robinson said, "Well, young man, I must go on duty now, but I hope you'll come and see us again before you go home. Come on in with me while I put on my uniform." Bobby wondered what uniform Mr. Robinson had to wear, and wasn't he surprised when he found that he was a policeman! He had never thought that policemen *could* be so jolly.

Mr. Robinson said, "How would you like to be a policeman, young man?" and

he put his helmet on Bobby's head and let him hold his truncheon.

"You won't be afraid of policemen now, will you?" said Aunt Janet.

And Bobby answered, "Not if they are all as nice as Mr. Robinson, Auntie!"

Aunt Janet took him over to see Mr. Robinson again before he went home, and he told Bobby all about his work and how kind policemen are to lost children and animals "Always remember a policeman is your friend, young man," said Mr. Robinson, and Bobby promised he would.

When he saw his mummy again he was able to tell her that he was no longer afraid of policemen, but that he liked them very much. Then he showed his sister, Mary,

how Mr. Robinson stops the motor cars and helps people to cross the road.

E. Bioletti.

Speech training.—In order that the children may fully appreciate this story, and to give them practice in speaking, the teacher might ask the following questions — 1. Of whom was Bobby afraid? 2 Who came to tea one day? 3. What did the postman bring Bobby? 4 What did the letter say? 5 How did Bobby travel to Aunt Janet's? 6. How did Bobby spend his time at Aunt Janet's? 7 Where did Bobby and Aunt Janet go to tea? 8 Tell what Bobby thought of Mr. Robinson. 9. What surprise did Bobby have? 10 What was Bobby able to tell his mummy when he got home?

RHYMES AND POEMS

MY POLICEMAN

He is always standing there
At the corner of the Square,
He is very big and fine
And his silver buttons shine.

All the carts and taxis do
Everything he tells them to,
And the little errand-boys
When they pass him make no noise.

Though I seem so very small
I am not afraid at all,
He and I are friends, you see,
And he always smiles at me

Once I wasn't very good
Rather near to where he stood,
But he never said a word
Though I'm sure he must have heard.

Nurse has a policeman too
(Hers has brown eyes, mine has blue),
Hers is sometimes on a horse,
But I like mine best of course

Rose Fyleman.

THERE WAS A MAN

There was a man, and he had nought,
And robbers came to rob him;
He crept up to the chimney top,
And then they thought they had him.

But he got down on t'other side,
And then they could not find him,
He ran fourteen miles in fifteen days,
And never looked behind him.

Old Rhyme.

CENTRE OF INTEREST— MEN WHO HELP US

XXII. THE ENGINE DRIVER AND THE MINER



TICKETS PLEASE!

Drawing in Outline of Picture No. 27 in the Portfolio.

Description of Picture No. 27.—This picture shows a child alighting from a train at a country station. She carries a small case in one hand and has put down her other bag in order to hand her ticket to the ticket collector. The engine is all that is visible of the train by which the child has come. It stands at the end of the platform, puffing out a cloud of steam. The engine driver is leaning out, waiting for the guard to wave the green flag, which is the sign for him to start the train again. At the far end of the platform are the signals and the signalman's box. The signalman can be seen through the window with his hand on a lever. A glimpse of the countryside is shown beyond the railway line. The ticket collector, with his clippers in one hand, holds out the other for the child's ticket.

From the letters on his collar, *S R.*, we see that the station is one on the Southern Railway. The collector wears a blue uniform suit, and a peaked cap, as does also the engine driver.

The frieze below the picture is made up of a toy engine drawing four trucks. One fifth of the number of children will require whole sheets of drawing paper with tracings of the engine, while the others will need half sheets with tracings of the trucks. Let the children colour the engine and trucks as shown in the picture, first giving the paper a water wash. They may then cut out their segments, either along the broken lines or along the outlines of the shapes, and mount them on the back of a strip of wall paper. Trace-outs for the frieze are given on pages 810 and 811.

LANGUAGE AND SPEECH TRAINING

Conversation on Picture No. 27.—The children should freely describe and discuss the picture. To stimulate thought and observation, and to bring to the notice of the children any points overlooked, the teacher may make some of the following suggestions—1. Tell what place you see in the picture. Is this a town station or a country station? 2. Tell what the girl is doing. What things does she hold in her hands? 3. Who is taking her ticket? 4. Tell how the ticket collector is dressed. 5. What are the letters on his collar? What do they mean? Why does he wear a red tie? (It can be used if necessary for a danger signal.) 6. Tell what the engine driver is doing. 7. Why does he look out? 8. Tell how many signals you can see. 9. Show with your arm how a signal says, "Stop." 10. Show with your arm how a signal says "Go on." 11. What is the signalman's shed called? 12. Tell what a signalman does. 13. What do you think is in the bags belonging to the girl? 14. Why are there labels

on her bags? 15. Tell what you see in the border under the picture.

Talks to the children—the engine driver.

Section I—Suppose mother told you that she would take you for a holiday to the seaside, how would you get there? You might go by train or by motor coach. If you were going somewhere not too far from home you might even walk, or if you were a little older you might go on a bicycle. Some people, when they want to travel, go by motor car or by aeroplane. If you wanted to go across the sea you would go by ship.

Nowadays we have many ways of travelling from place to place, but years ago there were no trains, or trams, or buses, or any of the machines we use to-day.

We rarely think, now, of horses for anything but pulling farm carts, but when your mothers and fathers were children there were not many motors, and for short

journeys people often rode in carriages drawn by horses.

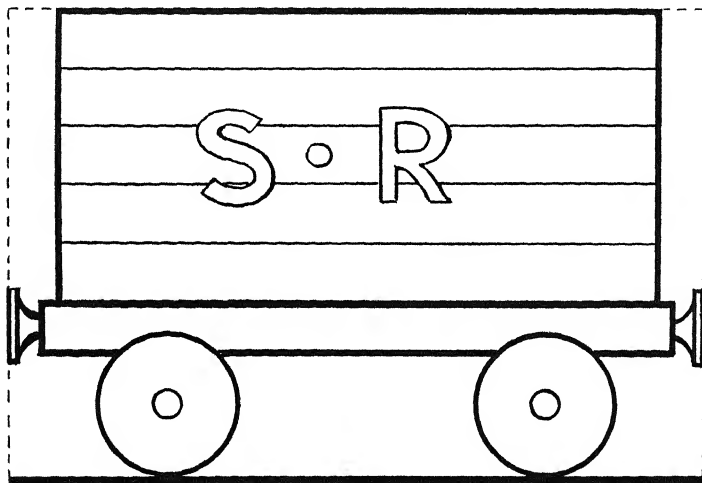
Before the railways were built people had to go long journeys by coach drawn by two, four or even six horses, or else they rode on horses. Journeys then took far longer than they do now. The coaches had to change horses every twenty miles or so. The roads were bad in those days and the coaches sometimes stuck in the mud; sometimes a wheel would come off, so you could not be sure that you would arrive at your journey's end just when you expected.

Travelling in olden days must have been very uncomfortable. The first trains were perhaps even more uncomfortable than the coaches, for instead of carriages like those we have to-day, they were like cattle trucks, open at the top and with hard wooden seats. The first engines could not run

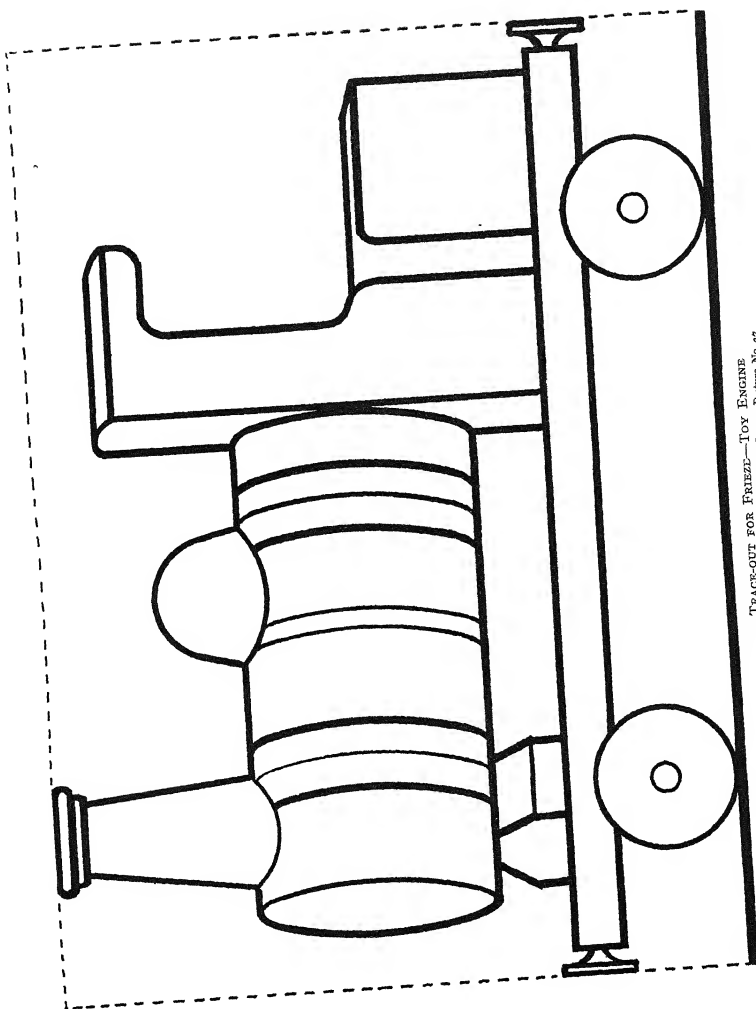
very fast so that journeys were still long and uncomfortable, and travellers got very dirty from the smoke and smuts of the engine.

Clever men made better and better engines and much more comfortable carriages, so that now we have soft seats to sit on and we can be warm in winter by turning on the steam heat which runs in pipes under the carriage seats; in summer we can keep cool by opening the windows. If we have to go a very long journey we can have our meals on the train and even sleep in a proper little bed, while the wheels sing us a song as they go speeding along the shining rails.

Section II.—Let us think now of all the men who have to work so that we can go on a journey by train. First of all, there are the men who make the trains and keep



TRACE-OUT FOR FRIEZE—TOY TRUCK
Trace this Drawing for part of the Frieze, Picture No. 27.



TRACE-OUT FOR FREEZE-TOY ENGINE
Trace this Drawing for Part of the Freeze, Picture No 27

them clean, and the men who build the railways and keep them in repair.

When we go to the station we see the man in the booking office who gives us our tickets, then there is the ticket collector who punches our tickets as we go on to the platform, and who takes the tickets from people as they leave the station. Then there are the porters who look after the luggage, and the stationmaster who has to see that everything on his station is working properly. Besides these, there are the man at the book stall, and the boys who run along beside the trains selling papers and chocolates, and the waiters in the refreshment room where we can get food if we are hungry.

If we are waiting for a train how can we tell if it is coming? We can watch the signals. If the signal drops it means that the line is clear and the train can come into the station, and it also means that the train is not far away. At night we see a green light for "line clear" and a red light for "danger." Who works the signals? The man in the signal box. You have seen him pulling over the levers which move the signals up or down. He gets a message by telephone from the last box the train passed, then he asks the next box if the line is clear, and afterwards he signals the train to go through. So the signaller has much important work to do, especially in a busy station, where there are many lines, for he has to switch the trains on to the right lines.

When the train comes in we see some more men who help us on our journey. There is the guard who sees that all the luggage is in the van and all the people safely in their carriages. Then he blows his whistle and waves a green flag—green for safety again. He also carries a red flag in case he wants to stop the train.

Up in the front of the train are the two men who really take us on our journey—the engine driver and the fireman who helps him. They have to stop and start the engine, keep the fire going, see that there is enough water in the boiler and watch the signals to see if the line is clear for the train to go through.

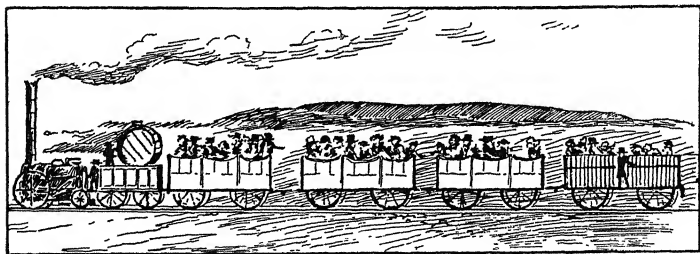
Section III.—Tell in simple language the story of George Stephenson who made the first efficient locomotive engine—see page 830

The coal miner.—

Section I.—What is the first thing we look for when we get home on a cold day? Yes, we run to the fire to get warm. What is it mother puts on the fire to burn? Let us look at this lump of coal. It is black and shiny, it is hard and heavy.

Now, let us think where it comes from. Most of you know that it is dug up out of the earth by men we call miners, and it is brought to our homes by train. But do you know how it got into the earth?

The earth is like a huge ball spinning round in space, travelling round the sun



ONE OF THE FIRST TRAINS

and being warmed by the sun. In the far off ages the earth was hot as the sun is now; there were no rocks and no land and sea such as there are now. The earth was a ball of fire spinning along in space. As it went on spinning, the outside of the ball began to cool, and as it cooled it hardened a little and water formed on its surface, so that there was land and sea, but the land was swampy and wet, and the sea was shallow and warm from the heat inside the earth. Strange fishes lived in the seas, and huge ferns, as tall as trees, grew in the swamps.

The earth kept cooling still more, and as it cooled it shrank. Next time mother makes a rice pudding, you watch it as it comes out of the oven. You will see the brown skin puffed up over the pudding, but as the pudding cools the skin wrinkles and falls till it lies in little ridges on the top of the dish. That is something like the way the earth's crust was behaving in those far off days. Sometimes the seas came over the swamps, and the trees and ferns were all buried under layers of mud and sand. Then the swamps would get pushed up above the water again and more trees and ferns would grow, only to be drowned again, so that there were layers of dead trees and layers of mud, one on top of the other, something like a pile of sandwiches.

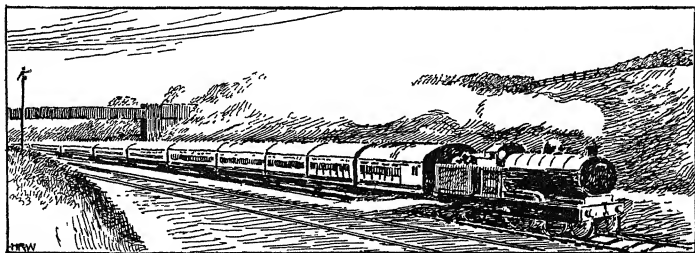
All this time the earth was cooling and shrinking and these layers of mud and dead trees were squeezed and pressed in

the shrinking. You know how you can squeeze a snowball till it becomes hard ice? That is like what happened to the mud. It was pressed and squeezed into coal. Then the layers of rock and coal were wrinkled up into hills and valleys as the earth cooled still more; till finally the land and the sea were formed as we know them to-day.

Section II.—The first men that lived on the earth had no houses, and no fires to warm them. They found that they could keep warm by covering their bodies with the skins of wild animals, and the meat from the animals they ate uncooked.

Then someone discovered fire. Perhaps it was during a dry hot summer, when the heat of the sun set the dried grass and trees on fire. We do not know how fire was discovered, but we do know how these men could make fire. They may have done it by striking two pieces of stone together or by rubbing two pieces of wood together until they made sparks. With these sparks they could set fire to dried grass and leaves and gradually add sticks and larger pieces of wood. At first men used only wood for their fires, but one day someone found a piece of hard black rock that would burn longer and better than wood.

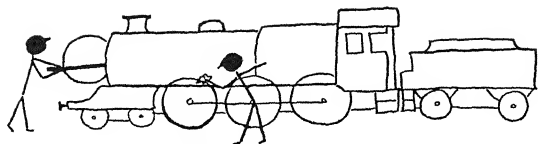
That hard black rock was coal, and men began searching for it, and they found patches of it in places where one of the layers had been squeezed up to the surface



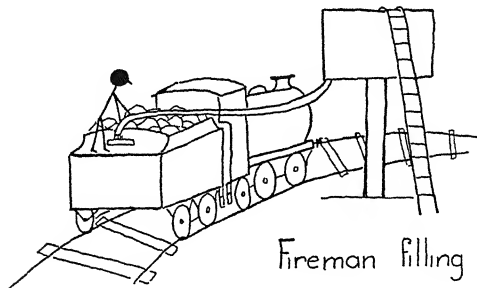
A MODERN TRAIN

Men who help us.

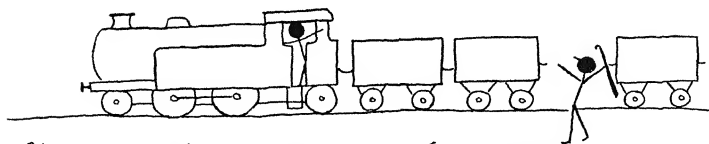
The engine driver.



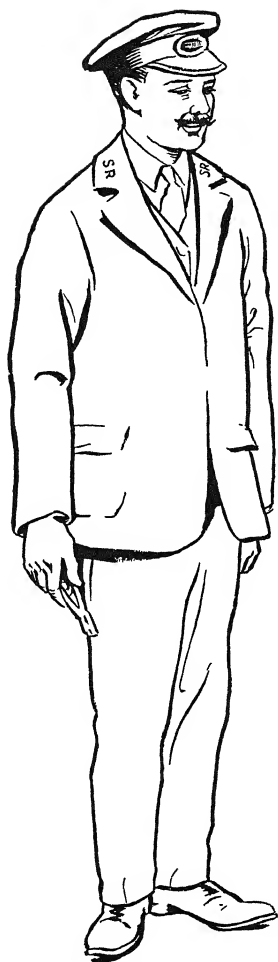
Cleaners working on an engine.



Fireman filling water tank.



Shunting with a tank-engine (no tender)



TRACE-OUT OF THE TICKET COLLECTOR FOR THE CHILDREN TO COLOUR

of the ground. For a long time there were no mines, for men could find all the coal they needed near the surface. As time went on and more coal was needed, men had to dig deeper and deeper, and so mines were made.

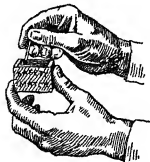
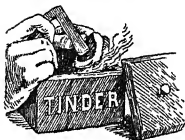
Can you tell me what happens if you dig a hole in the sand on the sea shore?

Before you have dug very deep you find water coming into your hole, and the same thing happened when men started digging mines. This water would sometimes cause serious floods in the mines, so some way had to be found of getting rid of it. At first a chain of buckets was used to haul the water up to the surface, but this took too long, and at last a man invented a pump driven by a steam engine, which put an end to the trouble from floods.

This was only one of the difficulties which the miners had to face. You know that one of the things we get from coal is gas, which is made for us at the gas works and brought to our homes in pipes. You know that if a gas tap is

turned on without a light being put to it, the gas will soon fill a room, and then, if you were to light a match in or near that room, there would be a terrible explosion. That is one reason why you should never touch a gas tap. A similar kind of gas forms in coal mines, so miners must never carry a naked light for fear of an explosion. When men first met this gas in mines, they did not know what to do. They had to have a light to work by, and a miner usually carried a candle stuck in the front of his cap, but of course this was not safe if there was any gas about.

A man, named Sir Humphrey Davy, discovered that the gas would not pass through a piece of very fine wire gauze; so he invented a lamp whose flame was covered with this gauze. It could be fixed to the miner's cap. Miners still use the *Davy Safety Lamp*, although nowadays



MAKING FIRE

- 1 USING THE TWIRL-STICK
- 2 and 3. TINDER BOX AND SULPHUR MATCH
- 4 MODERN SAFETY MATCH



DAVY LAMP

most mines have electric lights fixed in the main galleries, as the passages in a mine are called.

Section III—We will now see how a coal mine is made. You will remember how the layers of rock and the layers of coal were wrinkled and twisted as the earth cooled, so you will understand that

it is not an easy thing to make a mine. The first thing to do is to find the lowest part of the coal seam. This is done by boring all through the layers of rock with special tools which bring up pieces of the different rocks lying below the surface.

A hole, or shaft as it is called, is then dug down some distance below the lowest coal seam. This is done so that the water can drain into the lowest part of the mine, and from there it will be pumped up through pipes to the surface. Another shaft is sunk some distance away. The two shafts are connected by galleries at various depths as the coal seams occur. It is necessary to have two shafts in order to ventilate the mine.

The first shaft is called the *upcast* shaft, and besides the water pump at the top there is a large fan which draws all the bad air out of the mine. The good air enters through the *downcast* shaft, and it is drawn into all the galleries by means of smaller fans. There are doors in the galleries which have to be kept shut so that the good air shall not be wasted.

The cages, which carry the men down the mine and bring the loaded coal wagons up, are to be found in the downcast shaft; and at the bottom of this shaft are the stables for the pit ponies. These ponies, which are very small, spend their lives hauling trains of coal wagons along the galleries. The ponies are taken up to the surface occasionally for a rest. How they must love a roll in the grass, after being down in the mine for so long!

Section IV.—Now let us think about the miner. He is one of the bravest of the men who work for us. He never knows when an accident may happen to him, but he goes cheerfully to his work every day, digging out the coal which we need for so many purposes.

Let us pretend we are going to visit a coal mine to see the miners at their work.

First we should see a lot of machinery at the pit head. Most important of all the

machinery is the engine which works the lifts or cages by which we shall have to go down, just as the miners do. The steel ropes which hold the cages must be very strong, they must be inspected every day so that there is no fear of their breaking, every bit of the machinery must be carefully looked after, because the safety of the miners depends upon it.

We will step into one of these cages and go down into the mine until we come to one of the main galleries, where we shall leave the cage and walk along to the place where the men are working. We may have to go a long way if the mine is an old one and all the coal has been removed from near the shafts. We shall find the big galleries lighted with electricity, and we shall see the props of wood and stone, which hold up the sides and roof, we shall see, too, the rails for the trucks which run through all the galleries. We may meet a train of wagons drawn by one of the little pit ponies taking the coal to the shaft, ready to be hoisted to the surface.

We shall have to pass through the doors which regulate the flow of air, and we shall find each of these doors in charge of a boy who has not long started to work in the mine. It is his first job to open the door to let the wagon trains through, and to see that it is properly closed again.

As we walk further away from the shaft and leave the main galleries, the passages get lower and narrower, and soon we need the lamps we brought in order to see our way.

At last we reach the place where the miners are working, hewing out the coal with picks, kneeling or stooping, sometimes even lying on their backs to do their work. If you have ever tried to break a large lump of coal you will have some idea of what hard work it is.

Near by are two men breaking up the larger lumps of coal and loading it all into an empty wagon.

In another part of the gallery we see a man "holing." He is digging a hole under

a large block of coal, digging away the layer of rock upon which the coal rests, and putting in wooden supports to hold up the coal when he has finished. When he has removed all the rock, he crawls out and goes on to another job, and three more men come to knock away the supports. They have to be very quick and careful in case the coal should fall on them. They jump out of the way as the huge block of coal comes down with a crash; and by the time the dust has cleared away, the three men have gone on to their next job, leaving the loaders to break up the coal and shovel it into the wagons.

When his day's work is done, the miner walks to the shaft; sometimes he may have to walk as much as three miles! Then he climbs into the cage and is hauled up to the pit head, tired and very dirty. Most mines now have bathrooms, where the men can have a bath and put on clean clothing before going home.

You will understand now that a miner's work is hard and dangerous; we should think of him sometimes when we sit in front of a cosy fire, burning the coal that has to be dug up from far down in the earth.

Flash Cards.—The following are suggestive of suitable *Flash Cards* for *Picture No 27*—

1. Kate is going for a holiday.
She has two bags with her.
Kate has been in the train.
The engine driver is looking at Kate.
2. The collector takes Kate's ticket.
The collector wears a blue uniform.
He has a cap with a peak.
On his collar are the letters S.R.
He has a red tie.
3. The engine is painted green.
The engine is in the station.
The signal is down.
The road is clear.

Missing words.—Say such sentences as the following for the children to supply the missing colour-names.—

1. The engine is ——— (*green*).
2. The engine driver wears a ——— (*blue*) suit.
3. The collector wears a ——— (*red*) tie.
4. Kate's coat is ——— (*red*).

Individual reading cards.—This description of *Picture No. 27* can be hectographed for children's individual reading.—

The picture shows a railway station in the country. Kate is on the platform. She has just got off a train.

Kate has come by train alone. The guard on the train looked after her. The guard came to see that Kate got out at the right station. The guard helped her off the train.

Kate wears her best clothes. She has a coat, a hat and gloves. She has come for a holiday. Kate has two bags. In the bags are all the clothes she will need for the holiday.

The collector takes Kate's ticket. He says, "Tickets please!"

The collector wears a blue suit and a cap with a peak. His tie is red, so that he could use it as a flag. A red flag shows danger. In danger the collector can take off his tie and wave it. When the engine driver sees this red flag he stops the train. The collector has the letters S R on his collar. S R stands for *Southern Railway*.

You cannot see all Kate's train. But you can see the engine. The engine is painted green and black. It puffs out a cloud of white steam. You can see the engine driver. He is leaning out. He is looking at the guard at the other end of the platform. When the guard waves a green flag the engine driver will start the train.

There are two signals in the picture. One signal is up, the other is down. Which signal means "Stop"? Look at the signalman at work in his box.

At the bottom of the picture are two toy trains.

ACTIVITIES AND CONSTRUCTIVE WORK

Game—"Pit Ponies."—Tell the children how the miners sometimes bring their pit ponies up to the surface and set them to run races. A race-course is chalked out in the playground; the children are provided with reins of string or braid and so run races, pretending to be pit ponies or their riders.

Game—"The Express Train."—This is a variation of the old-fashioned "Family Coach," and makes a good indoor game. The teacher tells the story of how a certain family travelled by express train. Each child takes the name of something or someone mentioned in the story,—some part of the train, the officials, certain stations, and members of the family. The story is expanded or condensed according to the number of children taking part. Each child, as his or her appropriate name is mentioned, must jump up and turn round. When the teacher says the words "express train," all the children must get up and change places. A good plan is to write all the names in the story on the blackboard, and each child, as directed by the teacher, can copy one name on a piece of card. The cards are then collected, mixed, and given out again. In this way every child is given a part, and all have contributed to the making of the game. The cards can be collected afterwards, and kept for another time.

The following is a suitable beginning for the story, the words in italics being the names allotted to the children playing—

Mr. Brown and *Mrs. Brown* lived in *London*, in a neat little house near *Paddington Station*. *Mr. Brown* and *Mrs. Brown* had two children, *Anne* and *Philip*. Now, *Anne* had just had measles and *Philip* had had mumps, so *Mr. Brown* and *Mrs. Brown* decided that they must have a holiday.

One fine morning *Mr. Brown* and *Mrs. Brown* came out of their neat little house, followed by *Anne* and *Philip* leading their little dog *Toby*. And they all went straight over to *Paddington Station* to catch the *EXPRESS TRAIN* to *Torquay*.

Mr. Brown carried the bags and *Mrs. Brown* bought the tickets. She had to buy a special ticket for *Toby*. The *ticket collector* punched their tickets and a *porter* found them some seats in a third class *carriage*. They were only just in time, for the *signalman* let down the *signals* just as *Toby* was pulled into the *carriage*. The *engine driver* looked out, the *guard* waved his flag, the *engine* whistled, *Toby* barked, and they were off.

(The rest of the story describes their journey, with any adventures, till their arrival at *Torquay*.)

Game—playing at trains.—The Fives will enjoy playing at trains with a row of children for the train. The leading child is the engine driver and the last one is the guard. Other children act as signals along the route.

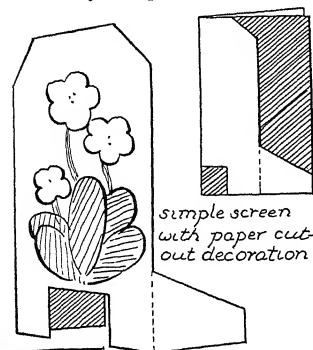
Paper cutting—frieze of coal cauldrons.—Cut a strip of black paper four times as long as its width and fold it into eight sections. Draw out the shape of half a cauldron on the folded paper and cut it out, taking care not to cut the edge and foot of the cauldron along the folded sides or the pattern will



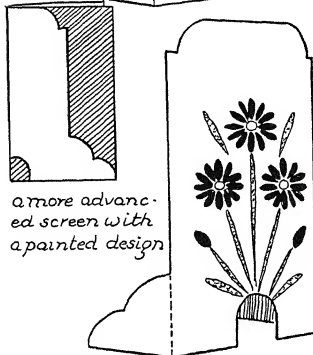
fold a strip of paper into small sections draw half a coal-cauldron & cut away shaded area

fall to pieces. Open out the pattern and mount it on coloured paper.

Paper cutting—fire screen.—The Sixes may make a fire screen from half a sheet of drawing paper. Fold the paper in half and cut out the shape shown in the diagram. A crease to guide cutting may be made by lightly folding the paper in half the same way again. Open out the paper and decorate the screen by pasting on coloured cut-out shapes of leaves and flowers. Draw the stems in crayon or paint.



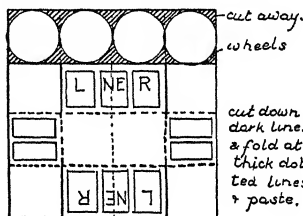
*simple screen
with paper cut-
out decoration*



*a more advanc-
ed screen with
a painted design*

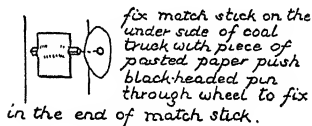
The older children may make a more elaborately cut screen and decorate it with water colours.

Paper model—coal truck.—Fold a square of paper four times, thus creasing it into sixteen squares. Unfold the paper, cut off the top line of squares and from each of these squares cut out a wheel drawn from a coin. Draw out the plan of the truck on the remainder of the squares as shown in the diagram, and decorate it with lines and the letters L N E R or L M S R. Cut down the dark lines shown in the diagram, fold up the heavy dotted lines and paste the flaps to the sides. Make the axle of a short piece of match stick and fix the wheel to it by a large-headed pin. Attach the axle to the bottom of the truck by a piece of paper pasted on. The little ones may attach the wheels by paper fasteners.

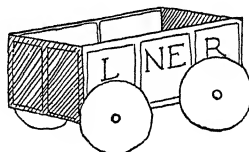


*cut away.
wheels*

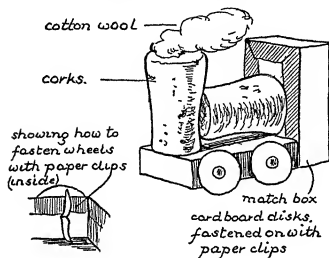
*cut down
dark lines
a fold at
thick dot-
ted lines
& paste.*



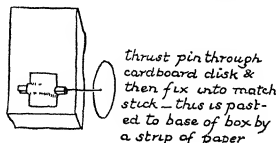
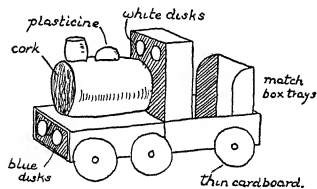
*fix match stick on the
under side of coal
truck with piece of
pasted paper push
black-headed pin
through wheel to fix
in the end of match stick.*



Model with odds and ends—train.—One of the simplest engines which the tiny ones can make is from a box and lid, or the trays of two match boxes, as shown in the diagram. The boxes should be stuck at right angles, and the body and funnel are corks stuck on. Cotton wool smoke is stuck to the funnel. The wheels are circles of thin card drawn from a farthing, or from a larger coin according to the size of the boxes. The wheels are attached to the side of the box with paper fasteners.

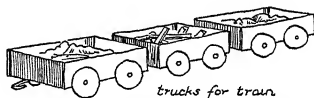


The older children will like to elaborate their engine. They may enlarge their tender to a box with upright paper trays, as shown in the second diagram. Match-box trucks may be added and filled with goods. The

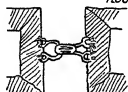


couplings of the trucks may be large hooks and eyes, sewn on the bottom edges of the boxes with a bodkin and double wool, which does not tear the paper joining of a match box as thread will do. White or blue paper discs may be stuck on the engine as shown.

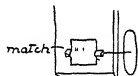
Some older children may wish to make their wheels run on axles. An easy way to do this is to pin the cardboard discs or slices of cork to short lengths of match stick by large-headed pins. The match stick must be cut with the scissors so that the total length of the axle allows the wheels to run freely. The match stick is attached to the bottom of the box by a strip of paper, as shown



trucks for train
made from match trays
& coupled together with
hooks and eyes.



hooks & eyes sewn
on bottom edges of
match trays



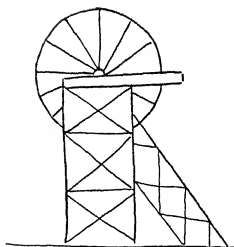
how to fix wheels
to match box
with a pin

Co-operative group model—a coal mine.—

A coal mine shown in section may be made in a large dress box. Fix strips of card, the width of the box sides, about 2 in from each side of the box. The spaces thus formed will represent the upcast and down-cast shafts. Make one or two galleries, across from one shaft to the other, in a similar manner, cutting holes for doors into the shafts. Line the shafts and galleries with black paper, or paint them black. Stretch brown paper between the galleries and colour them to represent layers of rock and coal.

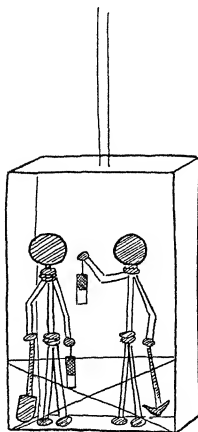
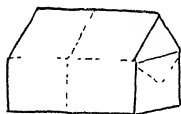
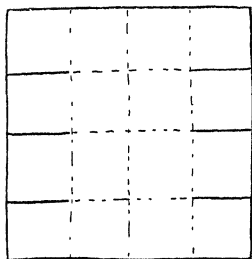
A small cardboard tube, such as pictures are packed in, will serve for a chimney, and

PROJECTS AND PICTURES

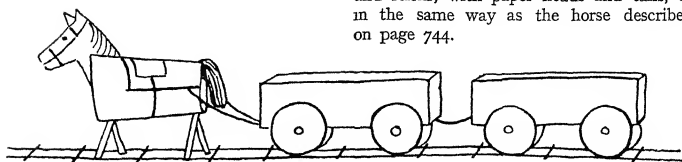


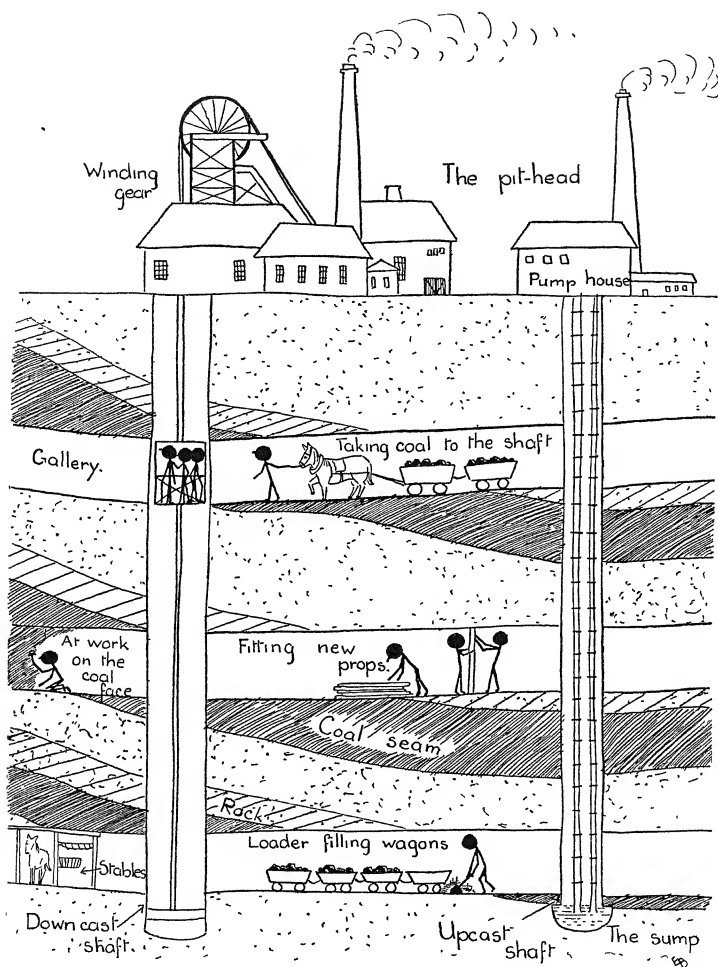
small cardboard boxes can be used for the pit-head buildings, or these can be folded from a square of paper and coloured appropriately. The winding apparatus for the cage can be drawn on card, cut out, and fixed to one of the pit-head buildings.

A match-box tray, turned on its end and suspended by threads will form a cage, and figures made from sticks and plasticine can be placed in the cage and in the galleries. The "miners" can carry plasticine tools and lamps.



Match-box trays, sticks and button moulds can be used to make a train of coal wagons, filled with very small lumps of real coal. The ponies can be made of corks and sticks, with paper heads and tails, or in the same way as the horse described on page 744.



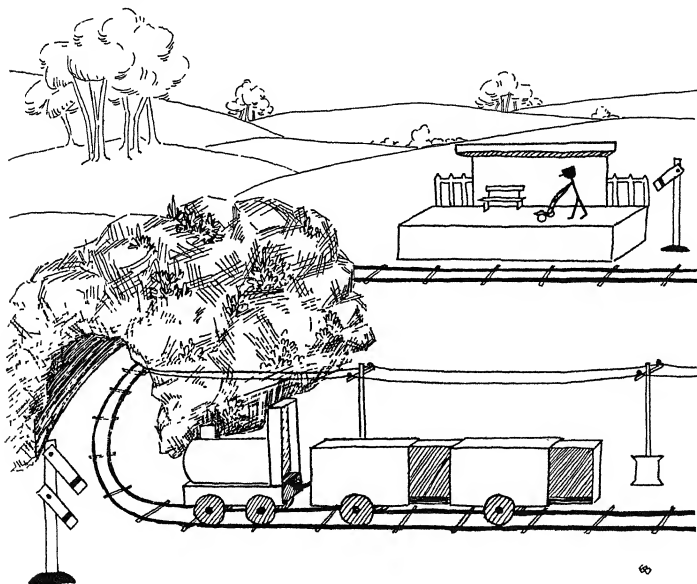


CO-OPERATIVE GROUP MODEL—A COAL MINE

Co-operative group model—toy railway.—Much interesting and profitable experience can be obtained from a good toy railway complete with points and crossings, etc., and if such a thing can be borrowed, the children will get quite a good idea of some aspects of an engine driver's work, and they will be furnished with suggestions for building their own group model of a railway, which might well form the constructive work in connection with this subject. Quite young children can achieve something in this direction, while the older ones can make more ambitious efforts.

Sticks and rolls of plasticine will form railway lines. In addition, or as an alternative to those parts already described, the train can be made up as follows:—Empty

match boxes can be used for carriages; these are covered with paper, coloured to represent doors and windows, and joined together by pushing the tray of one half-way into the box of another. Button moulds and sticks will serve as wheels and axles, and an engine can be devised from a cotton reel or piece of broom handle, covered with paper and mounted on a match box with the tray upright at the back for a cab, and with a cork chimney. Strips of card and a few paper fasteners will make signals, and telegraph posts can be devised from skewers and sticks with dabs of plasticine to represent insulators and to hold the cotton "wires." An empty shoe box will make a station, with stiff brown paper cut into railings, all the usual furnishings of a station,—



chocolate and weighing machines, porter's trucks, seats, etc.,—can be made from plasticine and sticks.

A realistic tunnel can be built up over a foundation of cardboard bent to shape, with the "hill" above made of crumpled brown paper dotted with moss. A back-

ground of fields and trees can be quickly made on a sheet of brown paper by using a scrap of sponge dipped into powdered pastels. Any tiny pieces of pastel can be used in this way, crushed into a powder with a rolling pin or glass bottle and rubbed on, when a large surface is to be coloured.

STORIES TO READ OR TELL

THE STRAW, THE COAL AND THE BEAN



A LITTLE old woman lived by herself in a little old house. She was so poor that when she was given a small bag of beans she smiled with joy and said, "Ha, ha! now I shall cook these and have a fine feast."

She went to a box and took a handful of straw to make her fire blaze. One long

stiff Straw slipped through her little old hands and fell to the ground. The little old woman filled her iron pot with water, took the small bag of beans, untied the string and turned the bag inside out over the pot.

Splash! splash! the beans fell into the water, but one big Bean was left behind in

a fold of the bag The little old woman tossed the bag on to her little old table, and as it flew through the air the last big Bean fell to the ground and lay beside the long stiff Straw

"The fire is not burning as it should," said the old dame, and she took the poker in her hand, and poked the coal. A half-burnt Coal gave a jump It sprang through the bars of the grate, and found itself beside the Straw and the Bean.

"What an escape I have had," it cried, "in a short time I should have become a cinder"

"I should have become nothing but a very little ash," said the Straw.

"I should have been made into soup," said the Bean

Then the three of them stood up and spoke together. "Let us go into the great world," said they, "for if we stay here, something dreadful will happen to us."

Off they went, but before long they were stopped by a stream The water came down very fast, for it had been raining The Coal was afraid of wetting its feet, for it would surely have caught cold, and the Bean said that if he got wet he would swell, and perhaps burst. The long stiff Straw rose up, and gently laid itself from bank to bank over the stream.

"I am a bridge," it cried. "You may safely cross by me"

The Coal sprang up quickly and stepped forward gaily. In its haste it began to smoke a little But when the Coal was half-way over, the noise of the rushing water filled it with fear, so that it could not move one step forward or backward.

The Straw began to scorch, but the Coal dared not move. The Straw began to burn, and then it broke, and fell into the stream. The Coal fell too "Sizzle! sizzle!" it cried, as the water put out its fire and heat

Now the Bean was still on the bank, and when it saw what had taken place, it began to laugh It laughed so much that it rocked to and fro "Ha! ha! I shall split my sides with laughing"

That did happen. Its skin cracked and all would have been over, had not a kind Tailor come by just then. He sat down cross-legged on a bank, and gently took the Bean in his fingers. He took his needle and his black thread, and stitched away so well that the Bean felt stronger and better than ever before

Strange to say, from that day to this, all beans have had black seams down their coats

Questions.—In order to see that the children thoroughly understand the story such questions as the following might be asked Who said?—

1. "Ha! ha! now I shall cook these and have a fine feast."
2. "What an escape I have had."
3. "I should have become nothing but a very little ash."
4. "I should have been made into soup"
5. "Let us go into the great world"
6. "I am a bridge"
7. "Sizzle! sizzle!"
8. "Ha! ha! I shall split my sides with laughing"

Questions can also be asked as to what the old woman said, what the bean said, and so forth.

THE LITTLE TANK ENGINE

HE was a bright new Tank Engine and very proud of it too. As he gently puffed his way out of the building sheds where he had been made, he thought to himself, "I feel so strong I'm sure I could puff my way all round the world How shining is my paint! How bright are all my metal parts! These old engines look quite dingy beside me. And how nice it is to be a Tank Engine with no fussy tender to trail along behind me I can carry all the water I want in my tanks on each side of my boiler, and my coal is

in a neat little room behind. How clumsy these big fellows do look to be sure!"

But the big fellows took no notice of the Little Tank Engine as he gently puffed on his way. He tried to make his puffs big and loud, and he did wish his driver would let him go really fast.

"I'm sure I could go as fast as these expresses I hear so much about, if only my driver would let me," he said to himself. "Now what are we stopping for? Oh! I see the signal is up. I shall have to keep my eyes open. What a good thing I learnt all I could while they were building me!"

The Little Tank Engine came to a standstill, but he went on talking to himself as hard as ever.

"Now I wonder if this fireman will remember to keep me well oiled," he said. "I really *can't* work if I don't get my proper ration of oil. I must say I feel quite comfortable so far. Ah! there goes the signal. All clear now, I suppose. Yes, off we go, and now we're leaving all those big, clumsy fellows behind. I'm not sorry. They are so *very* dirty, I really don't like being in their company."

I am afraid that he was a very concerted little Engine. Soon the big sheds and all the points and sidings were left behind, and the Little Tank Engine found himself puffing along the open line. "Ah! this is better," said he, "now we are moving a little. I'll show you what I can do. Faster and faster! Oh, I *am* enjoying myself! I wonder where we are going? I wonder what work I shall have to do? With my speed I should think they'll put me on an express train straight away."

For some time the Little Tank Engine had no breath to say any more. Then he came in sight of the goods yard. "Hallo!" cried he. "I do believe we are slowing down again. Not a very nice spot to stop in, I must say. Such a dirty, smoky place, it's worse than the works. Goodness me! They are not taking *me* into that horrible dirty goods yard, I hope! But they are! We've crossed the points! The signalman

must have made a mistake surely. Do they realise who I am, and how new and shining my paint is? Surely I can't be staying here."

The Little Tank Engine became so angry that he fairly hissed with rage, so that the driver let off some of his steam. After a while the driver and the fireman jumped out and went off home to tea, and the Little Tank Engine was left among the coal trucks in the goods yard.

He quivered with rage, but of course he couldn't get away without his driver and fireman, and soon he began to feel very lonely. He was far too proud to talk to the trucks, and there were no more engines near enough for him to speak to.

All night long he stood there, feeling lonely and miserable, and wishing himself back at the works, where at least he had friends to chat with.

At last early morning came, and men began moving about in the goods yard. Soon there was a whistle, points were moved and signals dropped, and in came a goods train that had been travelling all night, drawn by a dingy but very cheerful engine.

"Hallo, young fellow!" said he, when he saw the Little Tank Engine standing there all alone. "Are you the new shunting engine for this yard? You think yourself very fine, don't you, in all your shining paint? You'll soon get some of the shine taken off you here, my lad! Well! I mustn't stay gossiping. I've other places to call at before the lines get full of passenger trains. Cheerio! See you again!" And off he went, leaving some of his trucks behind him.

The Little Tank Engine then felt more wretched than ever. "Can that be true, I wonder?" he thought to himself. "Am I to spend my time shunting trucks in this dirty yard?" And he began to wish he had not been quite so proud of himself.

Sure enough, it was not long before his driver and fireman came back, and after cleaning him, they started him to work, shunting trucks. Very tiring he found it, stopping and starting so often, pulling

heavy trucks about, and clanking over points so many times. He soon got too tired to worry about the smoke and the dirt, which quickly began to settle all over his bright new paint. When the end of the day came, he no longer felt too proud to talk to the trucks, and he found, to his surprise, that they were quite interesting, after all.

Most of them had travelled a good deal, and they told him about all the places they had visited. After a few days of this work the Little Tank Engine felt that he and the trucks were old friends, and he forgot to bother about his new paint.

The old goods engine, who had spoken to him that first morning, often came in and gave him a greeting. "Well, my lad," he would say. "How are you getting on now? You look a little more like work with that layer of grime on you. You'll do. You're coming on nicely." The Little Tank Engine grew quite fond of him and looked forward to his coming.

Then one day his fireman came and gave him an extra cleaning and said to him, "Well, old lad, you've done very well, and now we shall have to lose you." The Little Tank Engine wondered very much what he meant, but soon a new driver and fireman came, drove him right out of the goods yard and hitched him on to a passenger train.

Then he felt proud and happy again, and even though it was only a small train making short journeys two or three times a day over a branch line, he was quite cheerful and happy about it. He had learnt not to be too proud and concerted.

E. Bioletti.

THE ADVENTURES OF A LITTLE SPARK

THERE was once a little spark who wished to make a noise in the world.

His mother, the Flame, told him he had better stay where he was in the nice warm grate, for that if he went away up the tall black chimney into the cold world he could never come back, and would certainly die.

"Nonsense!" said the spark. "A smart young fellow such as I can take care of himself anywhere. Besides, I've heard my father, the coal, say that he lived in the world a thousand years or more, so why shouldn't I?"

"You are not so wise as your father," replied the mother Flame mournfully, as she caressed a piece of black coal. "And if you leave me you will die."

But the spark didn't believe her, and was determined to go, and on the first opportunity away he sprang up the long dark chimney that rose like a tunnel over his head, and all the other sparks crackled with laughter to see him go up so finely. But the mother Flame sighed, and flung up her soft bright arms to hold him back, and when she found she couldn't do that she stretched as far up the chimney as she could in order to watch him.

"There he goes!" she said to the other sparks. "He'll never come down again!"

The spark had some difficulty in getting up the chimney, because the soot caught him, first on one side and then on the other, and said, "Do stay and play with us." But he was a concerted young spark, and thought himself too fine a fellow to play with black soot. He was going to do greater things than that. Besides, he was afraid the soot would dirty him—perhaps even put him out altogether. So he pushed it roughly aside, and after a while flew out at the top of the long black tunnel.

It was a dark, windy evening, and the air was cold. The spark shivered, but called out, "Hey, what a fine world it is!" He couldn't see it, you know, because it was dark, but he wanted his mother and brothers to think he could. And then he whirled away across the garden, over the hedge, and along the road.

There he saw a cart coming along, and as it passed him the horse struck a hard stone with its shoe, and another spark flew out. Our spark wanted a companion, for he was beginning to be rather cold and rather frightened, so he hurried towards the new

spark, and called out, "Hallo!" But the spark made no answer, and before he could speak again it went out "Stupid fellow!" exclaimed our spark "Such people don't know how to take care of themselves."

Then he came to a blacksmith's forge, and as he passed by the smith struck some red-hot iron which lay on the anvil with his hammer, and out flew a whole shower of sparks, large and small, red, yellow, and white. Most of them disappeared before they touched the ground, but one, larger than the rest, lay on his back on a flat stone, gazing up into the dark sky.

"You are a fine big spark!" said our spark, going up to him.

"I'm not a spark—I'm a star," said the blacksmith's spark reproachfully. "Don't you see my big brother up there?"

Our spark looked up and saw a great star shining down upon them.

"Are you a star?" he said to the blacksmith's spark. "I'm glad to know that, then I must be a star too! What business has that fellow up there to shine so bright and white? He's no better than we are I daresay we could look just as fine if we tried."

And the two silly sparks began to puff and blow, and swell themselves out to try and get as large as the star. Suddenly the blacksmith's spark burst into twenty little tiny sparks, which spurted round about and went out all in a moment.

"So," said our spark, letting himself get small again directly, "that's what comes of being envious and trying to look important. He might have known it wasn't safe."

Just then he caught sight of a shooting-star that flew across the sky, leaving a long trail of light behind it.

"Come," said the spark to himself, "I can do that at any rate." So he flew away on the first gust of wind that came by, and tried to look behind him to see whether the trail of light were following, but he was whirled up so high and so fast that he grew quite giddy, and couldn't tell which way he was behind and which before.

"Ha! this is glorious!" he gasped. "This is indeed seeing something of the world! Certainly I *am* a star—(if I could only see behind me!) How much better than——"

Here he came abruptly against a haystack which stood in a rickyard on the other side of a hedge.

"Oh, dear!" he crackled, "that was a very violent blow. Why, what's all this?"

For, to his astonishment, a hundred other sparks suddenly crackled round him, then hundreds more spread themselves about, and in another moment the whole side of the stack burst into flames with a roar. Another stack stood close to it, and the wind was blowing strongly; so that before our spark could recover from his surprise the second stack was on fire.

"Dear, dear!" exclaimed a man who was passing down the lane, "here's a state of affairs! All Farmer Browne's rickyard afire!" And he ran off and called up Farmer Browne, who had just taken off his shoes to go to bed, and a number of other men, who laid hands on all the spades, rakes, pitchforks, poles, scythes, and sticks they could find, and hurried to the rickyard. There they set to work to beat the burning stacks with all their might, as if it were their fault that they were on fire; and at every blow the men gave hundreds of sparks flew out, crackling with fun, and sprang high into the air, and went whirling away in great glee through the darkness.

Amongst them went our spark, the brightest and biggest of the company. They hustled each other round and round, and whirled and tumbled about. Oh! it was a fine—but a terrible—game the sparks had together on that dark, windy night!

"Ha! ha!" laughed our spark. "It's well indeed that I got away up the dark tunnel! Now I have seen something of the world and made a noise in it, for I have set——"

But he never finished his sentence, for just then he went out.

Meantime, one of the sparks at home had managed to clumb a little way up the tall dark chumney, as far as the bend, where he

could see up to the sky, and he peeped up to see whether he could learn anything about his wandering brother. Suddenly he called out, "Hey! Mother Flame, here's our spark shining ever so brightly right down our tunnel. He must be coming down to see us again!"

Then the Flame flickered and hissed, and leaped on to a piece of wood which was in the grate, and threw her soft bright arms round it, and so climbed up to where the little spark was sitting on a bit of soot on a brick, and she looked up the chimney and out at the sky above. She saw no spark, but a bright star looking calmly down the dark tunnel as she looked up.

"Where is our spark, sweet star?" she called up to the star

"He is gone out," replied the star in a clear, quiet voice

"Did he make a noise in the world?"

"Yes; he set Farmer Browne's rickyard on fire."

"Ah!" murmured the Flame "What's the use of having made a noise in the world! Now he is gone out!"

And she trembled and flickered, and then sank down again into the grate, and whispered a little dirge to the sparks for their lost brother

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A STORY FROM HISTORY

GEORGE STEPHENSON

IN a little village near Newcastle in the north of England, a boy who became a famous man was born in June, 1787, that is about 160 years ago. One small room was the only home for his father and mother and six brothers and sisters, and this shows how very poor the family was. George Stephenson was the boy's name, and he grew up in the midst of poverty to become the famous George Stephenson who made the *Rocket*, the first successful railway engine. The *Rocket* is still carefully kept for people to see what the first railway engine was like

Little George's father had very hard work to find enough food and clothes for his children. His work was to look after an engine which pumped up water from a coalpit, and his wages were so small that the children had a rough, hard life. George could not go to school, and did not learn to read and write until he was grown up. When he was quite small, little George earned a few pence by hoeing turnips or minding cows. Soon he went to mind a

horse at his father's mine, later on George had charge of an engine himself. George loved his engine so much that he was never tired of taking it to pieces and cleaning it, while the other boys of his own age were playing football on Saturday afternoons. He would make models of his engine in clay, and he studied parts of engines when they were taken to pieces, he learned what made the wheels go round. George could not read or write, but he learned all that could be learned about engines, by using his hands, his eyes and his ears. Thus the poor collier's child worked his way up in engine study from the bottom to the top. Because his wages were so small, he earned a little extra money by making and mending boots, mending clocks and watches, cutting out miners' clothes from rough cloth, and loading and unloading barges. When he was made a colliery fireman at nineteen shillings a week, George said, "I am rich for life." George went on working at engines, making good engines better, and making bad engines good, so that he became quite famous as an engine doctor. His mind was quick to invent a new

part that would work better than the old one.

Even when George Stephenson was married, still he had not been able to learn much of reading and writing. His own son, Robert, went to a good school, and in the evenings Robert taught his father what he had learned. George went on studying engines, and learned to make engines which could draw coal, and one after another he invented better and stronger engines which could pull heavier loads. Once George went to see *Puffing Blume*, a new kind of engine that was working at another coalpit, a noisy engine that could draw one truck of coal. George said to the owner, "I can make a better engine than yours."

The owner replied, "If you can make me a better engine, you shall have the money to do it with."

Then George set to work and made a better engine which would pull eight trucks of coal instead of one.

One thing that George Stephenson invented saved many lives. This was the famous Geordie safety lamp for mines, a lamp which would not explode in the most gassy atmosphere of the mine. This wonderful invention made George so famous, that money was subscribed to give him one thousand pounds, to show how people admired his cleverness in making the lamp.

After this George was made engineer of the first public railway. It took four years to lay the railway line from Stockton to Darlington. George built the engines and the trucks, and he drove the first train himself at the opening of the railway. This took place on September 27, 1825; six carriages carrying flour and coal, and one carriage carrying men, safely made the journey to Stockton, and came back with six hundred passengers. It makes us smile to-day to know that a man riding a horse carried a flag in front of the train. This railway line was the beginning of the marvellous network of lines that have been since laid all over the world, and it was

the clever brain of George Stephenson which brought about this great wonder, and made it possible to carry heavy loads and millions of people to all parts of the world by rail.

After the first railway was opened, the people of Manchester asked George Stephenson to make a railway from the port of Liverpool to Manchester. It seems strange to us now, that many people were very much against railways being made, and many persons tried to prevent George making a new one. It was said that the engines would burst and kill many people, that houses and ricks would be set on fire by the sparks, that cows and horses would be killed on the line, that the milk would be poisoned, that the wind and rain would stop the train. There was a big bog on the track and people said that a line could not be laid on it. But George Stephenson got hundreds of workmen together to dig, drain and fill up the bog. George had to answer all sorts of questions put to him by parliament, but at last he was able to lay his railway.

There was a public trial of three other engines as well as of George Stephenson's *Rocket*; but the *Rocket* won the race and travelled thirty miles an hour carrying thirteen tons after her, and the *Rocket* won the prize of five hundred pounds and was chosen as by far the best engine. On the day when the new railway was opened, George Stephenson himself drove the *Rocket* carrying many important persons.

Now George Stephenson and his son Robert were famous engineers, from being poor and unknown they were now known and admired by everybody. They went on building engines, trucks, carriages, and railways in England, in Europe, and even in America. They made fortunes for themselves and for those who helped them in the work. Through the inventions and work of the father and son, the whole world became richer, because goods could be carried more quickly and people could travel faster than ever before.

STORY AND PLAY

STORY—GREEDY FIRE

Introduction.—This original story may be easily dramatised by children of six and seven. Read the story straight through to the children, then discuss with them how to act it. Consider the setting, write the names of the characters on the board and allot the parts. Read the story once again so that the chosen children may pay particular attention to their parts, then let them act it. Re-read parts of the story if the children are at a loss to proceed. A dramatised version of the story, with suggestions for a full production, is given at the end of the story.

Story.—Kitchen Fire was a greedy creature. As soon as he was fed with a shovelful of Coal, he would suck up a great draught and go flaming up the chimney. In half an hour all the Coal would be burnt up, and Greedy Fire would be hungry again. Then he would roar terribly, and shout to Shovel to feed him. Shovel, who usually lay dozing on the fender, would wake up in a hurry, make a dash for the coal box, pick up some lumps of Coal and give them to Fire, then fall asleep for another half an hour.

This state of affairs made the poor lumps of Coal nervous. They used to sit in the coal box shivering and shaking, listening to Fire's flames lapping up the chimney, and waiting for the moment when Shovel would rush down and carry some of them away to feed the hungry monster. Paper and Sticks, too, dreaded to be used to light Kitchen Fire, for he always burst into flame so furiously that he burnt them to ashes before they had time to think, or say goodbye.

One day Fire had been even more greedy than usual. There was only one lump of

Coal left in the coal box, one Stick and one sheet of Paper.

"My last dear brother has gone," moaned the Coal. "I shall be the next."

Paper and Stick tried to comfort him.

"I wonder if Poker could help," suggested Stick, "He is strong, and sometimes knocks Fire about badly."

"Shovel is asleep again, and Fire is as deaf as a post. Yes, let us ask Poker," said Paper.

So they called to Poker, and he came over to speak to them.

"Dear Poker, will you help us?" begged Paper.

"You are stronger and more lively than we are," added Stick.

"What is the matter?" said Poker.

"Greedy Fire has eaten all our brothers and sisters and uncles and aunts, and soon he will eat us too," answered Coal.

"Can you put him out?" asked Stick.

"No," replied Poker, "I cannot put him out. But I can do something to help you."

"Oh, what is that?" they cried.

"I can push Shovel into the fireplace," said Poker. "Perhaps Fire might eat him instead. Anyway, Shovel could not put you in then."

The others agreed that this was a fine idea. So Poker whispered to Brush and Tongs and they promised to help him to push Shovel into Fire's arms the very next time he woke up.

Soon Fire began to grow hungry.

"Ah-h-h-h-h!" he roared. "Shovel! You lazy fellow! Wake up! I am hungry!"

Shovel woke up with a start. "Hungry, Sir? Yes, Sir," he cried, and got up to go to the coal box.

"Now!" said Poker. Then Poker, with Tongs and Brush, sprang upon Shovel and pushed him towards Fire.

"Hi! Let me go!" yelled Shovel, struggling.

"No, No! I do not want him! He is not good to eat," roared Fire

But Poker, Tongs and Brush pushed harder than ever.

"In you go!" cried Poker, and they knocked Shovel right into Fire's flames

"Oh, thank you! Thank you!" cried Coal, Stick and Paper.

"Ah-h-h-h! Ah-h-h-h!" roared Fire, angrily. "Who is going to feed me now?"

"Nobody," replied Poker, giving him a good poking. "You shall go out."

"No, I will not go out! I will spread and burn you all!" he hissed, stretching out his flames into the room.

Just then there was a gentle pitter-patter, trickle-trickle at the door, and Water came stealing in.

"Someone left the scullery tap running," she said, "and so I trickled in here. Can I do anything for you?"

"Please, dear Water, would you be kind enough to trickle on Fire and put him out?" said Coal

"He has eaten all our brothers and sisters," explained Stick.

"And all our uncles and aunts as well," added Paper.

"Certainly I will," said Water. She wound round to the fireplace and sent a shower of drops over Fire

Fire spluttered and sizzled, "Z-z-z-z! Oh! Ah!" he gasped.

Water took no notice of him, but went on quietly dripping till he turned quite black and went out.

"Is there anything else I can do?" asked Water. "Any washing, perhaps?"

"If only you could get us out of this kitchen!" said Stick. "We should not be used to light Fire again then."

"I am going into the garden," replied Water. "Float on me and you shall be carried out, too. By then you will be so wet that you will be of no use to light Fire."

"Oh, thank you!" cried Stick and Paper,

and as Water streamed by they floated away on her.

"Please take me too," begged Coal

"You are too heavy to float," said Water.

"But you can roll. I will push you."

So Tongs kindly helped Coal out of the coal box and Water pushed him along to the door.

"Good-bye, Poker, Tongs and Brush! Thank you for helping us!" cried Coal, as he went through into the garden

"Good-bye!" cried the others

The next day Kitchen Fire was taken out, because it was so wasteful, and a gas stove was put in, so Coal, Stick and Paper lived in the garden happily for the rest of their days

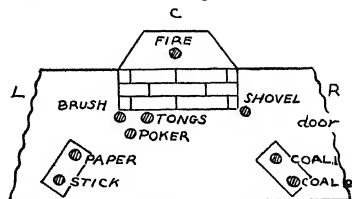
PLAY—GREEDY FIRE

This original play is a dramatised version of the preceding story, suitable for boys and girls of six and seven. Boys, especially, will enjoy it.

Characters in the play—FIRE (boy) FIRST LUMP OF COAL (boy). SECOND LUMP OF COAL (boy). STICK (boy or girl) PAPER (boy or girl) POKER (boy) SHOVEL (boy) WATER (girl)

Silent parts: BRUSH (boy or girl) TONGS (girl)

Scene—A Kitchen. Fire sits in fireplace waving flames. Shovel sits asleep on the right of Fire by the fender. Poker, Tongs and Brush stand by the fender on the left of Fire. Stick and Paper sit together in the left foreground in a box. Lumps of Coal sit together in the right foreground in a box. There is an exit on the right



ARRANGEMENT OF STAGE

Fire (roaring). Ah-h-h! Ah-h-h! I am hungry!

First Lump of Coal. Listen to Fire! He makes me shiver and shake.

Second Lump of Coal. You won't shiver long. As soon as he goes down, Shovel will fetch one of us to feed him.

Stick. Shovel is waiting, asleep as usual.

Paper. It is too bad to be given to feed Fire. I am the only sheet left of a huge family of Papers

Stick I am the last of the Sticks

First Lump of Coal You and Paper ought to be thankful that you are used only to give him an appetite in the morning We poor Coals feed him all day.

Second Lump of Coal. We are the only two Lumps left from our sack.

Fire. Ah-h-h! Shovel! Wake up! Feed me!

Shovel (waking up) Hungry, sir? Yes, sir.

[*Shovel runs down to First Lump of Coal*]

First Lump of Coal. Oh! Oh! Not yet!

Shovel No nonsense! In you go! (*Pushes First Lump of Coal into fireplace by Fire.*)

[*Coal sits down by Fire and helps to wave flames*]

Fire. Ah-h-h!

[*Shovel sits down and goes to sleep*]

Second Lump of Coal (wiping his eyes). My dear brother has gone! I shall be the next.

Stick. I wonder if Poker could help us? He is strong, and knocks Fire about badly, sometimes.

Paper Shovel is asleep again and Fire is as deaf as a post. Let us ask Poker.

Second Lump of Coal. Poker! Poker!

Poker. Yes, what is it? (*Comes over to them*)

Paper. Dear Poker, will you help us?

Stick. You are stronger and more lively than we are.

Poker. What is the matter?

Second Lump of Coal. Greedy Fire has eaten all our brothers and sisters and uncles and aunts, and soon he will eat us too.

Stick. Can you put him out?

Poker. No, I cannot put him out. But I can do something to help you.

Paper. What is that?

Poker. I can push Shovel into the fireplace. Perhaps Fire might eat him instead. Anyway, Shovel could not put you in then.

Stick. What a good idea!

Second Lump of Coal. But what about Tongs? Would she want to give us to Fire if Shovel did not?

Poker. Oh no! Tongs is a lady. She is kept for show and never soils her hands with Coals. She might even help me to push Shovel. I will ask her. And Brush will help too, I know, because Shovel is always dropping dust which Brush has to sweep up.

[*Poker goes to Tongs and Brush in turn and whispers to them. They nod their heads. Poker comes back to the others*]

Poker. We will set upon Shovel when next he gets up.

Fire. Ah-h-h! Shovel! You lazy fellow! Wake up! I am hungry!

Shovel (waking up). Hungry, sir? Yes, sir.

[*Shovel goes towards Coal. Poker, Tongs and Brush prepare to spring upon him*]

Poker. Now!

[*Poker, Tongs and Brush spring upon Shovel and push him towards the fireplace*]

Shovel (struggling). Hi! Let me go!

Fire. No! No! I do not want him! He is not good to eat!

Poker. In you go!

Shovel. Oh! Oh!

[*They push Shovel into the fireplace. Shovel sinks down, groaning*]

Poker. There!

Coal, Stick and Paper (clapping their hands) Oh, thank you! Thank you!

Fire (angrily). Ah-h-h! Ah-h-h! Who is going to feed me now?

Poker (shouting). Nobody. You shall go out.
Fire. No, I will not go out. I will spread and burn you all. (*Stretches out his flames.*) Ah-h-h!

[*Water comes in, slowly meandering round the room.*]

Second Lump of Coal. Hullo? Who is this?
Water. I am Water. Someone left the
 scullery tap running and so I trickled in here
Stick. You have come just at the right
 time

Fire (furiously). Ah-h-h! Ah-h-h!
(Stretches out his flames).

Water. Can I do anything for you?

Second Lump of Coal. Will you be kind
 enough to trickle round Fire and put him
 out?

Stick. He has eaten all our brothers and
 sisters.

Paper. And our aunts and uncles as well.

Water. Yes, of course I will.

*[Water glides round Fire, pretending to
 sprinkle water from her finger tips]*

Water. Pitter-pat! Drip-drip-drop! There
 you are!

Fire. Z-z-z-z! Oh! Ah!

*[Fire grunts and groans and finally drops
 flames and lies flat]*

Water. Why, here is Shovel! What is he
 doing in the fireplace?

Poker. He was Fire's servant, so we got
 him out of the way.

Water. He is red hot.

Second Lump of Coal. Leave him there
 He will cool slowly

Water. Is there anything else I can do?
 Any washing, perhaps?

Stick. I wish you could get us out of this
 kitchen so that we shall not be burnt to
 wake Fire up again

Water. I am going into the garden.
 Catch hold of my skirts and you shall be
 carried out with me. By then you will be
 so wet you will be no use for Fire.

Stick and Paper. Oh, thank you!

*[Stick and Paper catch hold of Water's
 skirts and move slowly towards the
 door together]*

Paper. Are you coming, Poker?

Poker. No, I am happier here with Tongs
 and Brush. I should miss poking Fire

Second Lump of Coal. Please take me too.

Water. You are too heavy to float. I will
 push you out

*[Water winds her way to Coal and then
 pushes him out, the others clinging to
 her skirts]*

Second Lump of Coal. Good-bye, Tongs,
 Brush and Poker! Thank you for helping
 us!

Water, Stick and Paper. Good-bye!

Poker. Good-bye!

[Tongs and Brush make stately bows]

Kate Lay.

SUGGESTIONS FOR A FULL PRODUCTION OF "GREEDY FIRE."

Scenery.—The backcloth (see page 37)
 represents the wall of a kitchen in which
 is a fireplace. A large Devon fireplace is
 easily represented by placing a three-sided
 screen or clothes horse, hung with black
 cloth or paper, behind the opening in the
 backcloth, thus forming a square "grate,"
 in which Fire sits. On each side of the
 fireplace brown paper pillars joined to a
 brown paper mantelpiece can be pasted or
 stitched to the backcloth. A clock and jug
 on the mantelpiece, a warming pan and
 toasting fork on the wall, can all be put
 on the backcloth in the same way. Any
 space on the wall enclosed by the pillars
 and mantelpiece can be marked out in
 charcoal or dye to represent bricks. In
 front of the fireplace a sheet of brown paper
 is laid on the floor, marked out in bricks
 to represent the hearth. A low fender made
 of children's bricks can be placed round
 the hearth.

Two mats of paper surrounded by chil-
 dren's bricks are placed on the floor in the
 foreground to represent boxes, *Stick* and
Paper sit in one and the two *Lumps of Coal*
 in the other. The entrance is in the wings
 on the right. See *Arrangement of Stage* on
 page 833.

Costumes.—In this play the children may
 make and wear bib-labels with their names,
 or the words "I am Poker," or "I am Tongs,"
 written on them. Instead of, or in addition
 to, their names, each child may make a

drawing on her label to show what she represents. The making of bib-labels is given on page 40.

The two *Coals*, *Stick*, *Paper*, *Poker*, *Shovel*, *Brush* and *Tongs* wear bib-labels



COSTUME FOR FIRE

only. *Fire* and *Water* may with advantage wear a costume as well as their labels.

Fire wears a shawl of red crêpe paper, 35 in long by 24 in. wide. It is worn longways across the shoulders with small loops of tape for the first finger of the hands to slip through. A narrow band of folded crêpe paper 24 in. long is sewn at the centre top of the shawl, thus ties round the neck to make the shawl secure. The lower edges of the paper are cut in a jagged way to represent flames. A headdress can be made of a strip of stiff red paper about 20 in long and 9 in. wide. Make a pencil line along the strip and from it draw jagged lines to represent flames reaching to the upper edge. Cut out the jagged edge and then paint the edges of the flames with yellow poster paint, or with water colour mixed with Chinese white. Before gumming the headdress together it should be tied on the child to ensure the exact fit.

Water wears a long, flowing garment of white crêpe paper, or an old nightdress, and moves with tiny shuffling steps, holding out her hands as if shaking water from her fingertips.

RHYMES AND POEMS

RIDDLE

Long legs, crooked thighs,
Little head, and no eyes.

(Answer. Tongs)

OLD KING COLE

(This rhyme is set to music on page 840)

Old King Cole
Was a merry old soul,
And a merry old soul was he
He called for his pipe,
And he called for his bowl,
And he called for his fiddlers three

Old Rhyme.



LITTLE POLLY FLINDERS

(This rhyme is set to music on page 841.)

Little Polly Flinders
Sat among the cinders
Warming her pretty little toes,
Her mother came and caught her,
And whipped her little daughter
For spoiling her nice new clothes.

Old Rhyme.



FROM A RAILWAY CARRIAGE

Faster than fairies, faster than witches,
Bridges and houses, hedges and ditches;
And, charging along like troops in a battle,
All through the meadows the horses and
cattle,

All of the sights of the hill and the plain
Fly as thick as driving rain,
And ever again, in the wink of an eye,
Painted stations whistle by.
Here is a child who clammers and scrambles,
All by himself and gathering brambles,
Here is a tramp who stands and gazes,
And here is the green for stringing the daisies!
Here is a cart run away in the road
Lumping along with man and load,
And here is a mill and there is a river
Each a glimpse and gone for ever!

Robert Louis Stevenson.

Note—In this poem Stevenson shows us pictures of all the things of which we catch glimpses when we are looking out of a railway carriage window as the train rushes along.

“Bridges and houses, hedges and ditches; . . .
And here is a mill and there is a river:
Each a glimpse and gone for ever!”

The poem has a *galloping* rhythm. It should be read with a swing, or the train will not go “Faster than fairies, faster than witches”. In olden days, people believed that witches were old women who rode through the air on broomsticks.

The poet points out so many things following quickly on one another that he makes us feel the breathless haste of the journey. He gives us just the outstanding features of each object as it leaps into sight, choosing picturesque words to enable



us to see it vividly "In the wink of an eye," he says "Painted stations whistle by"; a child by the roadside "clambers and scrambles", a stretch of green awakens memories of daisy chains, and a runaway cart goes "Lumping along with man and load" Two fine similes add to the beauty of the language. The startled horses and cattle scatter through the meadows, "Charging along *like troops in a battle*", and the different sights fly past the window "*as thick as driving rain*" "River" and "ever" are imperfect rhymes

1 Name all the things that can be seen from a railway carriage window 2 How fast do the stations whistle by? 3 How fast do the houses fly by? 4 What does the poet say about the horses and cattle in the meadows? 5. Find words which sound like their meanings 6 Why should you recite this poem quickly? 7. What are witches? 8. What do you remember about riding in a train?

"SOOEOP"

Black as a chimney is his face,
And ivory white his teeth,
And in his brass-bound cart he rides,
The chestnut blooms beneath.

"Sooeep, Sooeeep!" he cries, and brightly
peers
Thus way and that, to see
With his two light-blue shining eyes
What custom there may be.

And once inside the house, he'll squat,
And drive his rods on high,
Till twirls his sudden sooty brush
Against the morning sky.

Then 'mid his bulging bags of soot,
With half the world asleep,
His small cart wheels him off again,
Still hoarsely bawling, "Sooeeep!"

Walter de la Mare.

Note—Mr. de la Mare's poetry is full of clever word painting with plenty of colour. His "Sooeep" has a black face, white teeth and light-blue, shining eyes. He rides in a "brass-bound cart" and "brightly peers this way and that." In the third stanza are some words which express their meanings by their sounds

"He'll *squat*
And *drive* his rods on high,
Till *twirls* his sudden sooty brush"

Note the use of the word "sudden." Probably some children will have watched a chimney from the outside, waiting for the sudden appearance of the sweep's broom.

1 Which lines describe the "Sooeep"? 2. At what season of the year do chestnut trees bloom? 3. Which lines tell us that the "Sooeep" is at work very early in the day? 4 What colours would you want to paint a picture of him in his cart? 5. What words describe his brush and bags of soot? 6 Which line describes his voice? 7 Where have you seen the "Sooeep"? 8. What are *bulging* bags?

FAIRIES AND CHIMNEYS

You know the smoke from chimneys—
It often isn't smoke,
It's nothing but the fairies
Having such a joke
Round they fly and round about,
Higher still and higher—
"Dearie me," the people say,
"A chimney on fire!"

You know the noise the wind makes
At night-time now and then—
It's just those naughty fairies
At their tricks again—
Sitting in the chimney
Round and round in rows,
Singing all together
And warming up their toes.

Rose Fyleman.

THE RAILWAY TUNNEL

I've found the place where Darkness goes
 When Cockcrow gives it warning!
 I don't think everybody knows,
 I didn't, till this morning.
 When sunrise makes the hills look gay,
 And laughs in pool and runnel—
 The Shadows go and sit all day
 Inside the railway tunnel

That tunnel is the blackest place!
 As soon as you are in it
 You long to see the Sun's bright face,
 If just for half a minute
 The Shadows sit in rows and rows
 Packed close against each other,
 And, as the bold train onward goes,
 You keep tight hold of Mother

Then comes a sudden flashing spark
 Like light poured through a funnel,
 How *ad* they get there, in the Dark,
 Those lanterns in the tunnel?
 A flash—and back the Dark comes—*Puff!*
 But, if you're close to Mother,
 Each flash will last just long enough
 For smiling at each other.

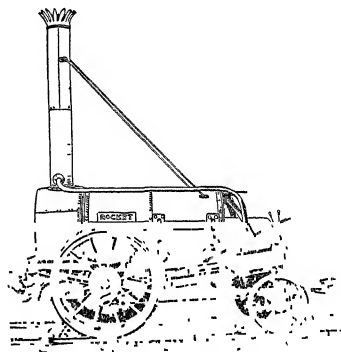
Then, all at once, the tunnel's done!
 The Shadows cannot chase you:
 And there's the friendly, laughing Sun
 All ready to embrace you!
 You're glad to see the clover-bloom,
 Green hedge and dancing runnel!
 You're glad to leave Night's waiting-room
 Inside the railway tunnel!

Queenie Scott-Hopper.

Note.—A preliminary explanation of the idea contained in this poem will help the children to appreciate it. The child in the poem finds a railway tunnel so dark, that

she imagines Night must hide there during the daytime. She calls the tunnel "Night's waiting-room", and fancies it packed with Darkness,—a place where "rows and rows" of shadows sit waiting for the end of the day.

The expression, "When Cockcrow gives it warning", will probably mean nothing to a child without a timely explanation that the sound of cocks crowing tells that the dawn of day is near, when, according to this fancy, the Darkness must run away to hide in the tunnel. "Runnel", meaning a little stream, is a word not in ordinary use. The darkness of the tunnel frightens the child, she keeps "tight hold of Mother", and calls the train "bold" for going through it. She compares the flash from each lantern to "light poured through a funnel", perhaps the teacher can obtain a funnel and allow the children to peep through the smaller end, the better to understand this rather difficult imagery.



GEORGE STEPHENSON'S LOCOMOTIVE, THE "ROCKET"

SONGS

OLD KING COLE

OLD RHYME

PERCY G. SAUNDERS

Marching
Doh-Bb Lah-G

Old King Cole was a

mer-ry old soul, And a mer-ry old soul was he. He

called for his pipe And he called for his bowl And he called for his fid - dlers three.

LITTLE POLLY FLINDERS

OLD RHYME

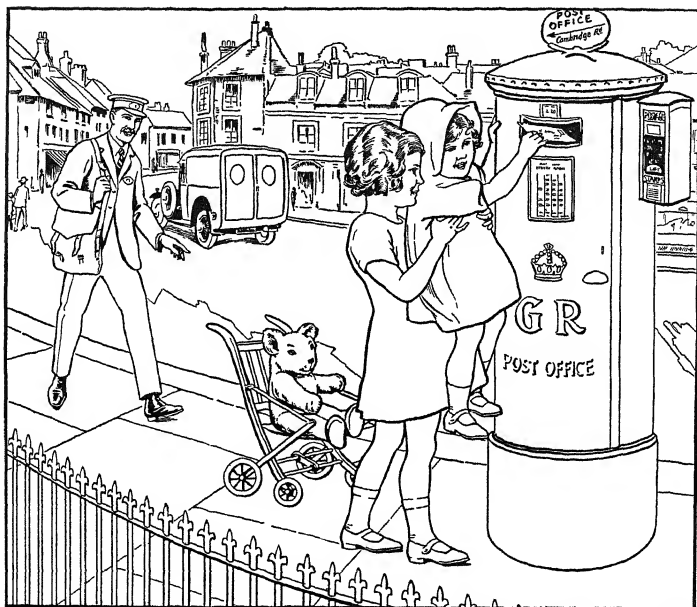
PERCY G. SAUNDERS

Doh = F

Lit - tle Pol - ly Flin - ders Sat a - mong the
 cin - ders Warm - ing her pret - ty lit - tle toes;
 Her mo - ther came and caught her And whipped her lit - tle
 daugh - ter For spoil - ing her nice new clothes.

CENTRE OF INTEREST— MEN WHO HELP US

XXIII. THE POSTMAN



A LETTER FOR MOTHER

Drawing in Outline of Picture No 28 in the Portfolio

Description of Picture No. 28.—A street scene is shown in this picture, in the foreground of which stands a pillar box. A girl is lifting her younger sister so that she may post a letter in the box. Near by is their toy—a Teddy bear in a push-chair.

The details of the pillar box are clearly shown. On its top is a notice with an arrow giving the road and direction of the nearest Post Office. The time plate shows that there are several collections from this box. Children should notice the crown and the letters *G R* (Georgius Rex—King George) indicating that the postal system belongs to the king, also the keyhole and handle for the use of the postman. A stamp machine is attached to the side of the box.

The postman is seen approaching to empty the letter box. Children are familiar with his uniform,—blue with a red stripe,—

and his peaked cap. He carries a letter bag on his shoulder. The red van going down the street is a mail van, as the words *Royal Mail* (visible only on the coloured Picture) tell us.

The frieze is made up of a postman with a mail bag thrown over his shoulder, followed by a sprightly messenger boy carrying a telegram. Trace-outs of these figures are given on pages 844 and 845. Half the number of children will require whole sheets of drawing paper, with tracings of the postman, while the others will need half sheets with tracings of the messenger boy. Let the children colour the figures as shown in the picture, first giving the paper a water wash. After colouring, they may cut out their segments along the dotted lines and mount them in pairs on the back of a strip of wall paper, to make a frieze, similar to the one under the picture, for the classroom wall.

LANGUAGE AND SPEECH TRAINING

Conversation on Picture No. 28.—The children should freely discuss and describe the picture. To stimulate thought and observation and to bring to the notice of the children any points overlooked, the teacher may make some of the following suggestions—1. Give a name to the bigger girl; e.g., *Maisie*. 2. Give a name to the smaller girl, e.g., *Rose*. 3. What is this picture called? 4. Who has the letter for mother? 5. Tell how Maisie helps Rose to post a letter. 6. Find Rose's toys. Say what they are. 7. What does the notice on the top of the pillar box tell you? 8. Why is there a crown and the letters *G.R.* on a pillar box? 9. What is the little box at the side of the letter box? 10. Why has a pillar box a keyhole and a handle? 11. Find the time plate. Say what it tells. 12. Find the postman. Tell what he carries. 13. Find the mail van. Tell what is written on the side of the van. 14. Say what colour these

things are:—a pillar box; a postman's uniform and a mail van. 15. Tell what you see in the border under the picture. 16. What do the letters *G.P.O.* stand for?

Talks to the children.

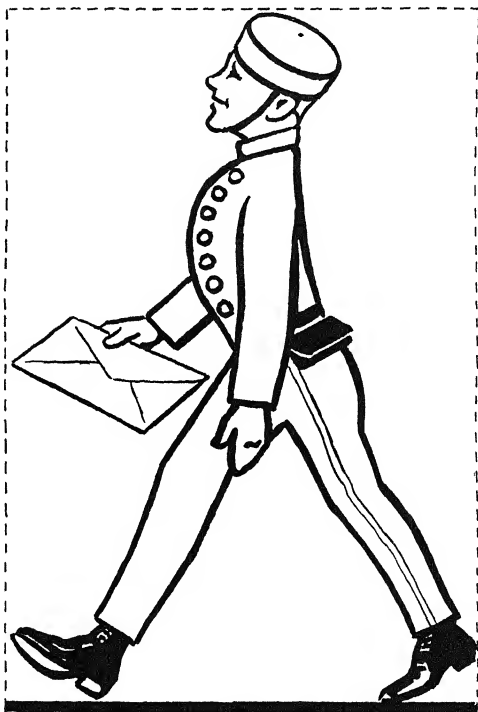
Section I.—In what different ways can we send messages to people who live some distance away? We can write a letter or, if the message is urgent, we can send a telegram. Other ways of sending messages are by telephone or wireless. Messages can be sent quickly across the sea by cablegram, telephone or wireless. We can send out messages in any of these ways by going to the nearest post office, but if we had lived a hundred years ago it would not have been so easy.

In the very earliest times there were no post offices or postmen. Few people could write, so there were no letters. If a man went to live away from his friends, he

would not hear about his old home unless he happened to meet some traveller who had passed that way.

Kings and important people sometimes wanted messages delivered in a hurry, so they would send a special messenger. Suppose one king wanted to send messages very quickly to another king or to his generals, he would have men posted at

intervals along the way and one man would run with the message as fast as he could to the first post, and the man there would run on to the next post, and so on. This would be much quicker than one man going all the way. Sometimes one man would take the message all the way, but he would ride a horse and change horses at the different posts on the road.



TRACE-OUT FOR FRIEZE—MESSENGER BOY
Trace this Drawing for part of the Frieze, Picture No. 28



TRACE-OUT FOR FRIEZE—POSTMAN
Trace this Drawing for part of the Frieze, Picture No. 28

Until men learned to write, the messages had to be spoken from one to another, but later on the messengers carried their letters. In far off days their letters were written with a pointed stick on a soft clay tablet. Later on they were written with ink on parchment, and in time they were written on paper. Until railways were built, all letters had to be carried by men on horse-back or in special mail coaches, which changed horses at the different posts.

Section II.—In the days when letters were carried by these messengers, (or *couriers*, as they were called) or by mail coach, it cost a good deal of money to send a message to anyone. There were no envelopes or stamps in those days. You wrote your message on a single piece of paper, folded it, and perhaps sealed it with hot wax. You would then take it to the nearest post and give it to the messenger, and he would collect the postage money from the person who received the letter. It would cost anything from fourpence to one shilling and eightpence, according to the distance it had to be carried.

About a hundred years ago, when railways instead of coaches were beginning to be used for travelling and sending letters and parcels, a man named Rowland Hill thought how much it would help everybody if the postage for letters were cheaper. He wanted all letters to cost only one penny, no matter how far they had to go. He thought that more people would write letters then, and so the post office would get more money from many cheap letters, than from a few dear ones. But it was a long time before he could make Parliament think as he did.

At last a law was passed making the postage on all letters one penny, and this penny was to be paid *before* the letter was sent. This great change led to the invention of stamps.

To-day we have to put a three-halfpenny stamp on our letters, but some day, perhaps, we shall have a penny post again.

Section III.—Let us see what happens to our letter when we have been to the post office for a stamp, stuck it on the envelope, and dropped the letter into the letter box. We have seen the postman drive up in his red van, unlock the box, put all the letters into a bag and drive off. Where does he go? He takes the letters to the sorting office, where they are date-stamped and sorted according to the towns to which they are addressed. They are tied in bundles and put in different bags, some to go to London to be sorted again, others to various big towns nearest to their addresses. The bags are all tied up and sealed, and taken by mail van to the railway station to be sent by train to London and other big towns.

Sometimes letters, especially on a late mail, are put into a bag and hung on a special metal arm beside the railway line. As the mail train rushes past, the bag is caught in a net on the train. There is a sorting office inside the train, where men are busy sorting the letters as the train goes on its journey. Further on some of the letters will be put into another bag and dropped into a net beside the line, where a postman will be waiting to take it to the nearest post office.

The letters are sorted again in the big town sorting offices, and sent out by road or rail to the smaller post offices. There the postmen each take the letters belonging to their own special districts, and soon your letter is delivered to its proper address.

Section IV.—How do you know a postman if you meet one? (Get the children to describe the uniform, blue with red stripe; remind them that postmen have recently had a new style of hat issued to them, in wet weather they wear a mackintosh cape, on dark evenings they must carry lamps to read addresses; they carry a bag for the letters.)

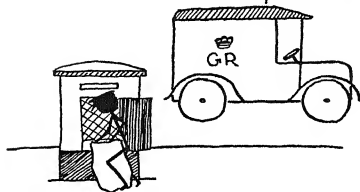
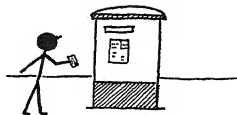
How does a postman take his letters round? In the town he generally walks, but in the country he may ride a bicycle.

Writing a Letter.



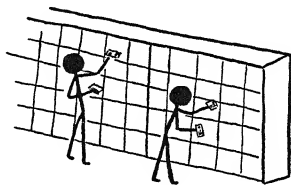
Jim is writing a letter to his cousin Tom.

Dick takes the letter out to the pillar box.



This Postman collects all the letters in his red van.

They are taken to the sorting office, to be date-stamped and sorted



This Postman takes the letter bags to the station

Another Postman delivers Jim's letter to Cousin Tom's house.



Parcels are taken out in a motor van in towns, but in the country the postmen have to carry them on their bicycles when they take the letters

Postmen have to pass an examination before they are appointed. Sometimes they start as messenger boys and take out telegrams. (Get the children to describe their uniform.) A postman may pass another examination and become a sorting clerk. He will then work in a sorting office and not have to wear a uniform.

Flash Cards.—The following are suggestive of suitable *Flash Cards* for *Picture No. 28* —

1. Maisie wrote a letter to mother
Rose put the letter in the pillar box
Maisie lifted Rose up.
Mother was glad to have a letter.
2. The postman is coming to the pillar box.
He will take out all the letters
He will put the letters in his bag
He will take them to the post office
3. The van is called the *Royal Mail*.
In the van are parcels.
The postman is taking the parcels to the houses.
The van runs very quickly.
4. The pillar box and van are red
Maisie's dress is green
Rose's dress is yellow
The postman's uniform is blue

Rhyming words.—Read aloud the following incomplete rhymes and let the children suggest the final words.—

1. You must, I think, be very strong;
To be a postman all day long,
For though it snows, or rains, or sleets,
He still goes walking through the ———
(streets)

2. What does the bee do?
Brings home honey
What does father do?
Brings home ——— (money).

Reading and drawing.—Write on cards directions for drawing, and distribute the cards among the children.—

- Draw a brown road
- Draw a white footpath.
- Put a mail van on the road
- Put a pillar box on the footpath

Individual reading cards.—This description of *Picture No. 28* can be hectographed for children's individual reading:—

The picture shows how little Rose posts a letter. Rose is not tall enough to reach the pillar box. Maisie, her big sister, lifts Rose up.

Look at the little box at the side of the pillar box. This little box holds stamps. Rose buys a stamp from this box when she posts a letter. Every letter must have a stamp.

On the top of the pillar box is a notice. The notice tells the way to the Post Office. The notice tells the road where the Post Office is.

Rose has a big Teddy bear. Rose takes Teddy with her when she goes out. She puts Teddy in a push-chair and gives him a ride. You can see Teddy in the push-chair.

The postman is coming down the street. He wears a blue suit with a red stripe. He wears a cap with a peak. He carries a bag on his shoulder.

The postman will open the pillar box with a key. Can you see the keyhole in the pillar box? Can you see a handle on the pillar box? The postman takes the letters out of the box. He puts the letters in his bag. Then he locks up the pillar box. The postman takes the letters to the sorting office.

Look at the red van going down the street. This van carries parcels. It is called a mail van

At the bottom of the picture you can see a row of postmen walking along. Each postman carries a bag of letters. A little messenger boy walks behind each postman. Each boy carries a telegram.

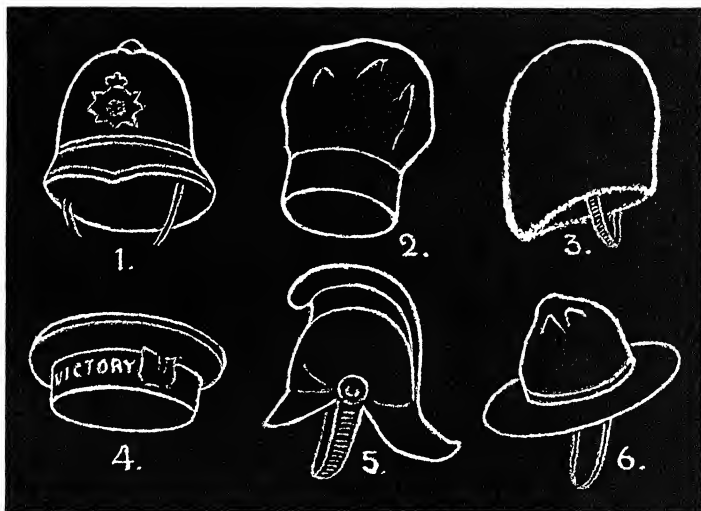
Men's headgear.—In connection with the talks on "Men Who Help Us," reference will be made to the different uniforms and dress worn by the workmen. Draw on the blackboard sketches of the headgear shown in the illustration, and let the children talk about each. The children should be encouraged to draw on their boards or in their books headgear worn by other people. The

names should be written under the drawings, and the best copies can be added to the *Scrapbook Dictionary*.

A game.—Write on the blackboard or on cards the following names of workmen —

carpenter, policeman, miner, painter, gardener.

A child then comes before the class and imitates the actions of one of the workmen. The children watch the actor and then tell the name of the workman whom they think the child is imitating.



MEN'S HEADGEAR

1 POLICEMAN

2 COOK

3 GUARD'S BUSBY

4 SAILOR

5 FIREMAN

6 SCOUT

ACTIVITIES AND CONSTRUCTIVE WORK

Classroom project, the post office system.—

These notes are for the use of teachers who are desirous of employing the project method with their children (See also page 446 in *Volume II*)

The first step is to prepare some letters. The children can fold paper and make their own envelopes, or use ordinary envelopes, or cut paper into the shape and size of an envelope. The method chosen will naturally depend on the age and capabilities of the children. If the children are old enough to write more than very short words, they can be taught to address an envelope in the correct way, first of all to their own mothers or other members of their family, then, in order to make the game more interesting and instructive, to imaginary people at a variety of towns. In the case of very young children it will be sufficient if one word is written on each envelope, the names of six different animals, *cat*, *dog*, etc., would do. The stamp can be drawn with a red crayon. When finished, the letters can be posted into one or more letter boxes. These can be made from a shoe box or similar box, covered with red paper and with the necessary slit cut near the top.

When all the letters are posted, a chosen "postman" can collect them in a bag and take them to the sorting office,—a table where certain children can be "sorting clerks." The letters should first be stamped, using any rubber stamp, or one of the letters from a toy printing set. Then they can be sorted according to towns, and carried off by other "postmen," who will deliver them to their allotted recipients.

With older children a department for telegrams can be set up, and "telegraph boys" called into service. The telephone systems described on page 447, or page 851, may also be included.

Game—"I sent a letter to my love."—

This is an old-fashioned game which can be played in the classroom or playground. The children stand in a circle holding hands, while one child walks round the outside of the ring carrying a piece of material the size of a handkerchief. (Obviously, the children's handkerchiefs should not be used for this purpose.) As she walks, the single child says

"I sent a letter to my love
And on the way I dropped it,
One of you has picked it up
And put it in his pocket"

Then, touching each child lightly on the shoulder with the material, she continues—

"It wasn't you, it wasn't you"—till, laying the material on one child's shoulder, she says, "It *was* you"—and begins to run. The child chosen runs in the opposite direction outside the circle and the one to reach the gap last, walks round the next time.

Game—the telephone system.—In connection with the Post Office, a game, useful for speech training, can be played with a toy imitation of a telephone made by the children. Instructions for making and using one are given in the constructive work section of this chapter, page 851.

This toy can be used in connection with many activities, e.g., calling the doctor, shopping, etc.

Game—post boys.—Tell the children how messages used to be sent by post boys passing the letter from one to another. Then arrange relay races in the playground, making two teams, in each of which the children carry a letter sent from one king to another.

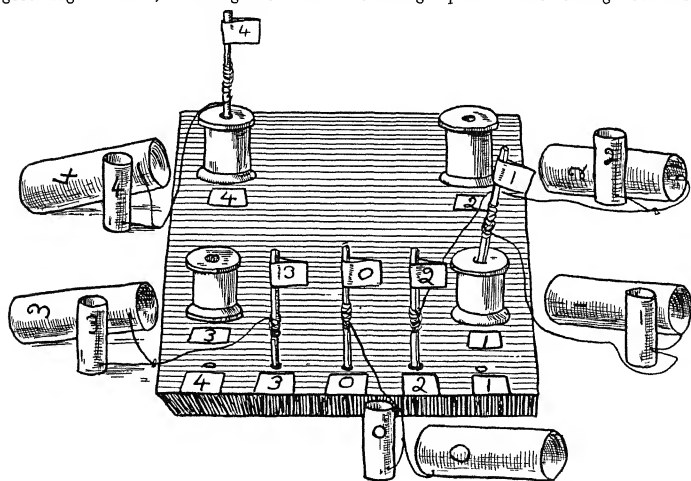
Model with odds and ends—postman.—A postman may be made from a clothes peg, plasticine and crêpe paper in the same way as the policeman described on page 802.

Co-operative group model—telephone system.—This is an instructive and interesting toy with which several children can play at the same time. Each child taking part makes and uses his own telephone and accessories. Mouthpieces and earpieces are destroyed after use to avoid risk of infection. From two to six children can have telephones, which are connected to a switch-board managed by an operator who also has a similar telephone. The telephones are numbered 1 to 4 (older children may like to use larger numbers), and the operator's number is 0. The sketch shows a telephone system with four telephones attached, as well as the one for the operator.

To make a telephone each child requires one whole sheet of drawing paper and a good length of wool, a kindergarten stick—

or other stick which is thin enough to pass through the hole of a cotton reel,—and a pencil or crayon.

A telephone is made as follows: fold and cut a sheet of drawing paper in half, then cut one half into half again. The half sheet makes the mouthpiece, and one quarter sheet the earpiece. Write the telephone number plainly on each of these two pieces, paste one short edge of each and roll them up to make tubes with the numbers outside. The remaining quarter sheet is used to make labels. From this spare paper cut a strip about 2 in long, paste the inside and fold it in half to enclose the stick like a flag. Write the number on both sides of the flag. Break off about 10 in of the wool, thread it through the base of the earpiece (the smaller tube) and tie a strip of paper on the inside end to make a tag. If a little bell like those used on children's reins is available, this may also be tied to the middle of the short piece of wool. Thread the longer piece of wool through the base



of the mouthpiece (the larger tube) and make a tag on the inside end in the same way. Tie the other end of the longer piece of wool to the stick,—a groove may be made in the stick, by means of scissors, to hold the end in place. Wind up the surplus wool on the stick and join the piece of wool from the earpiece to the longer wool near where it leaves the mouthpiece. The telephone is now complete.

The switchboard is an inverted shallow box. Holes are pierced along the front edge, one in the middle for the operator and one for each other telephone. The holes are made large enough to admit the ends of the sticks. A number of cotton reels, corresponding to the number of telephones (excluding the operator's), are stuck upright on the box. The operator labels the middle hole 0. Each other child makes two labels from his spare paper, puts his number on each, and pastes one label by a hole and one by a reel on the switchboard.

To work the telephone, the children first place their sticks in the correct holes accord-

ing to the numbers on the flags, unwinding enough wool so that they can hold their telephones at convenient distances from the switchboard. The operator sits in front of the switchboard with his telephone. To ring up, the caller jingles the bell on his wool, or says "Ding! ding!" The operator answers "Hallo!" The caller tells his own number, "Number 1 speaking." The operator removes the stick labelled 1 from the hole, puts it into the reel marked 1, then says "Number, please?" and the caller replies "Number 4." The operator removes number 4 from the hole and puts it into the reel marked 4. This arrangement is shown in the sketch. The holders of telephones 1 and 4 now carry on a conversation until the operator says "Two minutes, please," and replaces the sticks in the holes, when the conversation is cut off. Two telephones are connected only when their corresponding sticks are both in the reels. When a stick is in the box hole the telephone is connected to the operator only.

A more advanced method of making a telephone is shown on page 447.

STORIES TO READ OR TELL

THE MAGIC BUTTON

THERE was once a postman who lived all by himself in London. He had one room where he slept and had his meals, and he did all his own cooking and cleaning. He had to get up early every morning, collect his bag of letters from the sorting office and go his rounds up and down the long, dingy streets.

One morning when he had finished delivering his letters, he put his hand into his bag to make sure that there were no more, and to his surprise he found something round and hard in it. He drew the thing out, and found it to be a button, painted red with black spots.

"It must have fallen out of one of the letters," thought the postman. So, being an honest man, he went back to all the houses where he had just called, to see who should have received a button. But though he saw all the people who had had letters, none of them would take the button.

So the postman brought the button back to the sorting office. The men in the sorting office turned the button over and over.

"It is of no value," they said. "You had better keep it, if you cannot find anyone to own it."

So the postman took the button home and put it on his mantelpiece.

That night as he lay in bed, the moonlight shone through his window and lighted

up the red button with black spots, as it lay on the mantelpiece

At once the button began to speak

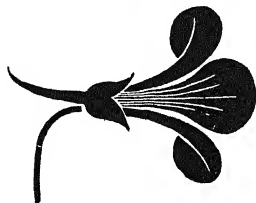
"I don't belong to you, you know;
Please take me where I ought to go,"

it said, in a clear piping voice

The postman jumped out of bed

"Yes, I will take you where you ought to go," he said, "if you will tell me where that is."

"Nasturtiums!" replied the button



And at that minute the moon went behind a cloud and the button would not say any more.

The postman thought and thought, but he could not think what place the button meant by "Nasturtiums."

The next day he put the button in a little box and carried it in his pocket as he went on his rounds. And he looked at the names of all the houses as he passed, to see if one was called "Nasturtiums," but he could not find one.

Then he looked in the Post Office Directory to see if a Mr. and Mrs. Nasturtium lived in London. But there was nobody of that name. The postman was greatly puzzled.

The next night was cloudy and there was no moonlight, so although the postman put the button on his mantelpiece and begged it to say something, it remained quiet like any ordinary button.

There was no moon for three nights after that, and the postman carried the button about with him all day, hoping to find the place where it belonged.

When the night of the new moon came, the postman was quite excited. He put the button on a table by his bed where the moonlight would fall on it. Then he lay down in bed and waited.

As soon as the first ray of moonlight fell on the button, it piped out, as before —

"I don't belong to you, you know,
Please take me where I ought to go."

"Where is that?" asked the postman

The button answered as before, "Nasturtiums."

In spite of all the postman's questions, "Nasturtiums," was all the button would say.

The next day was August Bank Holiday, and the postman had planned to go for a long walk in the country. So he was up early as usual. He packed some sandwiches, took his walking stick and was just going out when he noticed the button lying on the table by the bed. The postman then thought the button might like a holiday as well as he, so he slipped the button in its box, put it in his pocket, and set off.

He took a tram to a little country station and then he began to walk. When he sat down to have his sandwiches, he took out the button and laid it on the grass so that it could have the air and sunshine.

When evening drew near the postman turned his steps back to the railway station. Suddenly he thought he heard a tiny noise coming from the box where the button lay. He took out the box from his pocket and held it to his ear. Sure enough, there was a tap-tap-tapping inside. He opened the box, but there lay the button, just as usual.

"Now I wonder what it means," thought the postman.

Just then his eye fell on a lovely red nasturtium clinging to the wall by the side of the road.

"Nasturtiums!" cried the postman.

He bent down, laid the box on a nasturtium leaf and took off the lid. At once the red button with black spots shot out six

little black legs, scuttled away over the side of the box and was gone

"Why," exclaimed the postman "It's a huge ladybird!" And so it was, a ladybird as big as a button

Then the postman called out, "Good-bye!" put the box in his pocket again and went home by the train

When he got to his room he took out the box, and to his surprise something rattled inside. It was a present from the button,—a red ring with black spots that just fitted his little finger. The postman always wears the ring. He says it has brought him good luck, for he is a postmaster now, and lives in a big house.

Kate Lay.

MR. BIGGS AND HIS MAGIC SEEDS

A POSTMAN named Mr Biggs lived in the country in a pretty little cottage with a fine big garden. He had only to do one round each day, so in the afternoons he was free to work in his garden, and he kept it very neat and tidy and grew so many flowers and vegetables that he always had a few to spare for the neighbours

Everyone liked Mr Biggs, for he always had time to stop for a word or two. He was not like the town postmen who are always in a hurry and who go to so many houses that they never really get to know the people who live in them. Mr Biggs knew everybody on his round and would ask how the pigs were getting on, or the chickens, or the calves as the case might be.

Now one day when Mr. Biggs was planting flower seeds in his garden,—nasturtiums, poppies and Canterbury bells—he found a packet of seeds without a label or picture or anything to say what they were

"Now that's mighty queer," said Mr Biggs scratching his head. "I'm quite sure I didn't buy those." And he turned the packet over this way and that, and finally opened it. There were only six seeds in it

and they were not like any seeds he had ever seen before. They were shaped like tiny beans, bright red with one black spot and a little green tuft sticking out at one end

"Well," said Mr Biggs more mystified than ever, "that's the queerest seed I've ever seen, but I may as well plant them and see what they are." So he prepared a special little bed for them and marked the place with a stick, so that he should not forget and plant something else on the top of them

Weeks went by and all the other seeds had grown up. Some were ready to bloom, but still that special little bed was bare. "Just some kind of joke, they must have been," thought Mr. Biggs. Then one morning, when he went down the garden to see that everything was all right before he started on his round, he was astonished to find six little flowers had sprung up in the bed. Such queer little flowers they were too. At a first glance you might have taken them for six little red imps with black waistcoats and tiny green caps, but when you looked again you saw that they were really flowers nodding on slender black stems

Mr Biggs stood and looked and scratched his head and looked again, then he rubbed his eyes and looked again, but they were still there and he was not dreaming

"Well, if that don't beat all," he said to a blackbird who was whistling in the pear tree. But the blackbird took no notice, so Mr Biggs stooped down and carefully picked one of the strange blossoms and tucked it in his buttonhole. That was against the post-office rules as Mr Biggs very well knew, but somehow he didn't seem to care

He jumped on his bicycle and rushed off to the Post Office, very anxious to show off his new flower, but on the way his hat blew off in a sudden gust of wind and he had to jump off his bicycle and chase his hat half way across a field. That made him afraid he would be late, so he had to hurry,

and in the excitement he forgot all about his flower and did not remember it till he had got all his letters sorted and was ready to start on his round. Then when he looked down and was just about to tell the other postmen of his wonderful flower, he found it had gone.

"Must have lost it in that field," he said to himself, and as he was in a hurry to be off, he decided to say nothing of it till he got back.

The first place he had to call at was old Mrs. Markham's cottage, and he astonished the good lady by asking how her pig was to-day.

"Pig!" she said. "Pig? I haven't had any pigs these twenty years. What's the matter with you to-day, Mr. Biggs? Lost your memory?"

Poor Mr. Biggs was quite upset. "Now what made me say that?" he wondered.

Next he called on Mr. Price and found himself hoping that Mr. Price's rheumatism was better. "Rheumatism?" said Mr. Price, "rheumatism? I never had any rheumatism. What's the matter with you, Mr. Biggs?" Poor Mr. Biggs did not know what was the matter with him, so he went on to Miss Pringle's, and found himself asking after the calf that was born yesterday.

"Calf?" said Miss Pringle, "calf? I've got no calves here. Are you sure you're quite well to-day, Mr. Biggs?" Mr. Biggs wondered if he was quite well or if he had got a touch of sunstroke or something.

Next he called on Farmer Jones, and asked him if his parrot was talking better to-day. "Parrot?" said Farmer Jones, "parrot? I never had any parrots here. You're wandering in your mind, man!"

So it went on, everywhere poor Mr. Biggs said the wrong thing, till he began to wonder if it was all a bad dream.

His last call was at a farm quite a long way from the village, so it was some time before he got back to the Post Office, and when he did another shock awaited him. There were Farmer Jones, and Miss Pringle,

and Mr. Price and old Mrs. Markham and all the other people he had been to that morning all as angry as could be. They were saying he ought to be reported, he ought not to be a postman any longer, and he ought to be ashamed of himself.

Poor Mr. Biggs was quite upset. He thought they were angry because he had made all the wrong remarks to them that morning, but it was worse than that, much worse. He had delivered all the letters and parcels to the wrong people! Miss Pringle had Farmer Jones' turnip seed, Farmer Jones had a sample of some new cure for rheumatism that Mrs. Markham had sent away for, Mr. Price had a new book of crochet patterns that ought to have gone to Miss Pringle, and so on. It was the most dreadful muddle, and poor Mr. Biggs was quite bewildered. In fact he got so worried, that he took his hat off to scratch his head as he always did when he was puzzled, and *there* in his hat was a little red imp with a black waistcoat and a little green cap on his head, sitting there laughing at them all.

Then before anyone could move, he had jumped through the window and was away like a puff of wind.

Mr. Biggs had to tell all about the queer seeds he had planted, and how he had picked the flower that very morning and put it in his buttonhole, though he knew it was against the rules. He told them how all his mistakes and misfortunes had begun from that moment. "And now," he said, "I'm going to get rid of the other five flowers before they start their mischief."

Miss Pringle and Mr. Price and all the other people thought they would like to see these strange flowers too, so they all followed Mr. Biggs to his cottage, and he led them up the garden to the special bed he had prepared for those magic seeds. But when they got there, nothing was to be seen but six little black stems! So who knows what mischief those little flower imps are up to now?

E. Brioletts.

RHYMES AND POEMS

THE POSTMAN

You must, I think, be very strong
To be a postman all day long,
For tho' it snows, or rains, or sleets,
He still goes walking through the streets.

I'm sometimes there when he unlocks
And empties out the letter-box,
And if I keep my letter back
He lets me drop it in his sack.

Rose Fyleman

THE PILLAR-BOX

The pillar-box is fat and red,
Its mouth is very wide,
It wears a Tammy on its head—
It must be dark inside.

And really it's the greatest fun
When mother lets me stop
And post the letters one by one—
I like to hear them drop

Rose Fyleman.

THE POSTMAN

The postman is a busy man,
Collecting letters in his van
To catch the evening mail.

He takes them to the G.P.O.,
They're stamped and sorted, then they go
By road, or 'plane, or rail.

Next day we hear his cheery knock,
He always comes at eight o'clock,
He's never known to fail.

E. Broleth.

THE JOYOUS PROGRESSION OF ENGLISH AND NUMBER

(A well-tried method of teaching reading and number)

By EDITH I WALKER

Introduction.—"Let us have more joy in life," says one of the greatest of our English educational idealists, thus summing up very succinctly the vision which should loom large on the horizon of everyone privileged to take part in the training of the little ones of our modern nursery and infant schools

It is certainly true to say that any place of education which fails to provide the atmosphere of joy and freedom essential

to healthy mental and physical development, is falling short of the highest aims which it was created to fulfil.

The methods of presentation of the earliest stages in English and arithmetic described hereafter, were formulated and first carried into effect as far back as 1911, when the educational world of that time was beginning to be greatly agitated over the supposed poor quality of the results produced in the infant schools

During the preceding decade a peaceful revolution had been quietly gathering force. Enlightened and courageous infant teachers, dissatisfied with the artificiality of the school atmosphere, its rigidity, its failure to arouse interest, and its utter detachment from any of the vital activities of childhood, had, with boundless hope and enthusiasm, begun their task of widening and deepening the educational outlook. The introduction of such subjects as nature study, gardening, handwork, music, rhythmic movement, dramatisation, art and natural play into a curriculum which had previously included little beyond the 3 Rs, gradually effected an almost magical transformation. The spirit indeed moved over the dead bones and made them live. Even the awful atmosphere and rigid restrictions of the war years did not completely check the advance. The early and more difficult years of the post-war period brought into prominence the first real challenge. The official attitude of approval, which had hitherto been unstintingly bestowed, was then, in many instances, changed into one of demand for material rather than spiritual results. The downward pressure from above, due to the increasing difficulty of the qualifying examination for free-place scholarships to the secondary schools, seriously threatened the very existence of the infant schools under their freer and happier conditions.

The *Joyous Progression of English and Number* is the result of a determined and prolonged effort to preserve for our younger children the happy freedom of development which has been so hardly won for them, and to prove that such freedom can and does result in work of a higher and more intelligent type.

The experiment has lacked neither official benediction nor tangible reward in the form of scholarships, but for those of us whose energies have been spent in its development, no recompense could ever compare with that which came to us in the opening words of the report of a highly-placed official when he said, "This school is a very happy place."

ENGLISH

The *Joyous Progression of English* differs in many respects from older and traditional methods.—

I In its choice of whole words suggested by pictures as the unit of unaided language recognition in the earliest stages

The "Look and Say" method dealt with whole words, but children were quite dependent upon repetition after the teacher to achieve their recognition and remembrance

II In its method of approach through the telling and reproduction of stories

III In its unchanging instrument for attacking unfamiliar words—a phonic one at every stage.

The old-fashioned "Phonic" method broke down at irregular words.

IV In its provision of real reading matter from the very beginning of the language progression

V In its projection of the personalities and affections of the home into the school to provide the play devices which make work a joyous thing.

VI In its complete, logical, and carefully graded sequence

VII In its use of pictures at every stage as powerful agents of association

VIII In its use of the children's powers of creative activity.

THE METHOD EXPLAINED

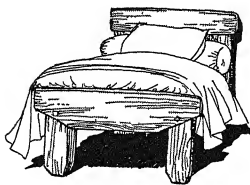
I. The whole word.—The whole word, not the sentence, is the earliest unit of word recognition.

By listening to children in their first attempts at speech we find that—

- (a) They attempt to imitate sounds made by their mother to describe familiar objects of their environment.
- (b) They invariably attempt to use whole words to name objects, however imperfect the attempt may be, and so gradually build up a large vocabulary.

When children leave the small and sheltered environment of home for the larger and more bewildering one of school, it is vitally necessary to forge a strong link of association between the two at the first possible moment.

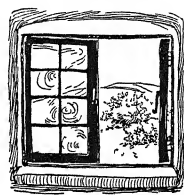
The teacher draws on the blackboard (with brightly coloured chalks) several simple pictures of objects already well-known to all children, e.g.,—



bed



clock



window

Procedure—Children should be encouraged to talk about their own bed at home.

Can you lie on the bed which I have drawn? Why not? The bed which I have drawn we will call a **LOOKING-PICTURE** because it looks like a real bed.

Close beneath I will make another kind of picture which does not *look* like a bed but which *says* bed. This we will call a **TALKING-PICTURE**.

After dealing similarly with looking- and talking-pictures of other familiar objects, children quickly discover that they can read the talking-pictures for themselves through the suggestion of the looking-pictures. In this way symbolic language becomes to them a living thing, a vital part of themselves, by means of which they can enter into relationship with their fellows.

The association between a simple picture of *bed* and the single word *bed* is a strong and self-evident one.

The association between the more involved picture of *a child sleeping in a bed* and the sentence *I go to sleep in my bed* is a much

weaker one, which cannot be effected without the help of the teacher.

II. The story as the main method of approach.—Attempts have been made by various prominent educationists during the last few years to condemn the telling or reading of stories, especially fairy stories, to young children, but no true child-lover can afford to ignore them because—

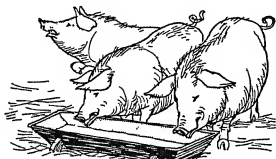
- (a) They arouse a stronger, keener and more lasting interest than any other subject of a school programme
- (b) Through them children can enter into the great heritage of the past, a birthright of which no one has the right to deprive them.
- (c) They will provide for generations yet unborn the record of the stirring events of the present age in which the children of to-day are taking their part.

It is, of course, essential that the greatest care should be exercised in the choice of stories to be told to small children. They should be simplified in language and modified in action, so that no cruel or ugly incident may mar the joyous fearlessness which should be the birthright of every child.

Procedure—The teacher should read or tell the story of *The Three Little Pigs* in simple, dramatic language, without pause or break.

Children, you have heard me read from my book the story of *The Three Little Pigs*, now I am going to show you how you can read part of the story to me

The teacher quickly sketches on the blackboard simple looking-pictures of the following:—



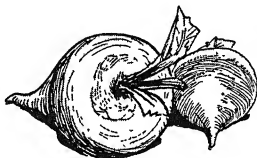
three pigs



wolf



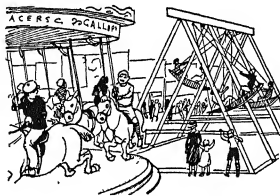
straw house



turnips



Mr Man



the fair

You remember our lesson about looking-pictures and talking-pictures. Here are some looking-pictures from the story you have just heard. Watch while I give to each looking-picture its own talking-picture.

Now you may take your book and find the page which has the picture of these things. Look carefully at each looking-picture in turn, and then read for each one the talking-picture belonging to it. By frequent presentation of other interesting stories and rhymes, children soon become

proficient in reading for themselves the word-pictures contained in them, and so gradually acquire a large and interesting vocabulary. They will, through constant repetition of these whole words, now begin to recognise as a part of each one its initial *sound*. Some children do it quite naturally, others need the stimulation of such a direction as —

Point to the talking-picture which says *pig*.
Begin to read it for me
Stop almost before you have begun

Deal similarly with all the story pictures in *Joyous English Preparation Stage I* *

* Published by Messrs Macmillan & Co., Ltd.

It is most important to use at this stage only words whose initial sound is a regular one; e.g., the *a* in *pan* is regular, but the *a* in *swan* is irregular

Children are now ready for concentration on the initial sounds learned from the talking-pictures of the story section. This is effected by means of an alphabet picture set, examples of which are here given.—

is prevented by the use of three picture sets, one of which is illustrated below.



camel
codfish



frog
fishing



chickens



ostrich
offend



rabbit
rotten



shepherd

Find in your book the first page of smaller pictures and more words

Point to the talking-picture which says *camel* and begin to read it for me.

Stop almost before you have begun.

Now tell me what the beginning of *camel* says.

Go through all the talking-pictures beneath the looking-pictures on these three pages and find out and repeat the beginnings of every one. Each is marked by a thick line. Children should have very frequent practice in this until they are perfectly familiar with the initial sound of every talking-picture of the set.

Impressions of difficult initial sounds —
Confusion between such similar sounds as —

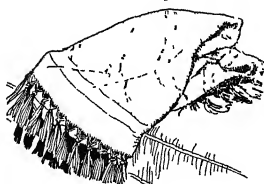
b and *d*

sh and *ch*

th (hard blowing) and *th* (soft blowing)



Chinaman



shawl

Children learn to detect the very faint distinction in sound between the two similar sounds by constant repetition of the talking-pictures. By the use of an interesting picture and the underlining of the difficult sounds, the children can attack the sounds without any other help than that of suggestion.

It is extremely important that children should be able to recognise and repeat quickly all regular initial sounds before passing on to the difficult stage of sound-junction. Any confusion or hesitation here, militates against the rapid combination of sounds which is so essential there.

III. Phonic sound-junction.—Phonic sound-junction is the instrument of attack for words not suggested by a picture.

The term *phonetic* is deliberately avoided, because of its association with a method advocated from time to time by those who have tried to eliminate the difficulties of English spelling and pronunciation, by representing all words as a combination of regular sounds, whether they are regular or irregular in pronunciation and structure. Such attempts have failed. The value of a phonic method in teaching children to construct regular words has always been fully recognised because —

- (a) It is the only direct instrument for cultivating even and perfect enunciation.
- (b) It gives to children, as soon as they have acquired the habit of rapid sound-junction, an instrument with which they can successfully and quickly attack unfamiliar words. It makes them independent.

Joyous English does not claim to have used sound elements in strict accordance with orthodox phonetic teaching, but it does claim —

- (a) To have used the sound elements into which ordinary cultured speech can be resolved, to help children to achieve happily the difficult task of teaching themselves to read.

- (b) To have extended the phonic principle to irregular words and to long-vowel words, by a simple play device without alteration of the structure familiar through long usage.

The first approach to sound-junction.—Hitherto, attention has been exclusively devoted to the acquisition of a large vocabulary of interesting picture words, and through their constant repetition the learning naturally, and often without suggestion, of the initial sounds of letters. Concentration on these has been achieved by an alphabet picture set.

The most difficult part of the *Joyous English* progression has now to be attacked.

For the first time, children are allowed to see letters representing the regular sound elements in isolation from whole words. A large sheet showing the letters of the alphabet should be hung up.

Procedure — Look at this sheet. It has no looking-pictures and no talking-pictures, but only the beginnings of talking-pictures which you already know.

Some of you are boy children, others are girl children. We are going to call these beginnings of talking-pictures **SOUND CHILDREN**. You will learn how to join several of them together to make new talking-pictures, and then you will notice them in the middle and at the end of words, as well as at the beginning.

Print on your blackboard the sound children at the beginning of *lemon*, *apple*, *matches* and *parrot*, arranging them as I do on my board —

l
a
m
p

On your blackboards you have printed four sound children, each of them the beginning of a word which you know. Now print these four children in another way. —

l a m p

I want you to find out this talking-picture, not with the help of a looking-picture but by joining all the sound children together. Begin at the beginning. Try to make them all talk at once.

Find in your book the first of the pages which has smaller pictures and more words than usual. Take a piece of coloured paper and cover up the looking-picture of *apple*. Try to join together all the sound children as you did just now. Cover up each looking-picture in turn and join the sound children together very quickly.

Under the talking-picture of *apple* you will find another which has no picture. Try to do the same with that one.

The picture set is used in this way to help the children through the first difficult progress of sound-junction. Any attempts to sound the beginning of the word and to guess the rest from the picture, must be firmly checked.

The play device—The play device by which the phonic principle of sound-junction is extended to irregular words is illustrated below.

Irregularities of the pronunciation of the English language fall naturally into two main divisions—

- (a) Irregular short sounds
- (b) Long vowel sounds.

Irregular short sounds.—

^Tfeather (irregular vowel sound), is a combination of the regular sounds of *f*, *th*, *er*, with a group sound having the sound of *e* as in *egg*.

^Tfence (irregular consonant sound) is a combination of the regular sounds of *f*, *e*, *n*, with a sound child *c* having the sound of *s*, as in *sun*, and a silent *e*.

N.B.—The end sound of *-er*, and the silence of final *e*, are best taught incidentally at the initial sound and word building section.

All short-sound irregularities are presented as topsy-turvy sound children and are arranged in a number of "type" sound groups, according to the regular sound with which they can be associated.

SOME TOPSY-TURVY SOUND CHILDREN

- (e) regular sound



feather

- (o) regular sound



swan

- (s) regular sound



fence

- (u) regular sound



shovel

- (i) regular sound



biscuits

- (j) regular sound



bridge

The association between the first irregular word of each "type" and the regular sound with which it is associated, is effected by a looking-picture.

The single sound or group sound, which by its appearance departs from regularity, is emphasised by a heavy overlining T.

Procedure—Take your book and find the page which shows you the looking pictures of feather, swan, and fence

Point to the sound child *o* above the looking-picture of *swan*. Sound it for me

Point to the talking-picture of swan and read it to me. In the middle of this talking-picture is a sound child marked over the top by a T

Though this sound child looks like *a* as in *apple*, it says *o*, as the looking-picture of *swan* teaches you. Because it looks like one thing and says another, we call it a TOPSY-TURVY SOUND CHILD.

Look carefully at the other pictures on this page and the next, and build up all the talking-pictures.

Long vowel sounds.—

pearls, a long-vowel word, is a combination of the regular sounds of *p*, *l*, *s*, with a group sound *ear* associated with four others having the sound of *ir* as in *bird*.

great, a long-vowel word, is a combination of the regular sounds of *g*, *r*, *t*, with a group sound of *ea* associated with many others having the sound of long *ā*

needle, a long-vowel word, is a combination of the regular sounds of *n*, *d*, *l*, with a group sound *ee* associated with many others having the sound of long *ē*.

It is obviously impossible to give to each of the sound children in these words its regular sound. It is, however, possible, legitimate, and certainly most effective, to attach a single sound to each of the groups remaining when every regular sound has been eliminated.

All similar type group sounds are associated together, and are presented as sound children in the family of a sound daddy

The first word of each type is suggested by a looking-picture, and the sound child or children having the name of the sound daddy, is emphasised in each word by a heavy underlining. The number of "type" group sounds in the long-vowel section has been brought to an irreducible minimum, by a broad classification of sounds. Minor differences of pronunciation which are largely inflectional, may, if necessary, be taught later when the mechanical difficulties of reading have been overcome.

THE SOUND FAMILY DADDY OF ā.



train
afraid
contain

e at the end (ay)
spade tray
plate holiday
races spray

(ai)

er at the end
baker
paper
trader

(eigh)
weights
sleigh
eight

y at the end
baby
lady
shady

(ei)
skem
veins
reins

(ey)
prey
they
grey

(ea)
steak
break
great

(a)



bacon
station
basin

All group sounds in the same family are invariably presented together, after the

associated story has been read to the children by the teacher. Every word in the story which contains one or more of the sound children of daddy *ā*, has this emphasised by an underlining, as in the sound family illustrated above.

Procedure—Teacher reads from *The Second Joyous Story Book* the story *Holidays*

Print on your blackboard the sound child at the beginning of *apple*.

Sound it for me

Sometimes this sound child changes its name to *ā*, (long)

Put a lying-down line over its head to remind you of the change. Teacher then pronounces *ā* slowly and carefully several times, while children watch her lips and listen to her voice. They then imitate her, and continue to do so until the sound is thoroughly mastered.

We are going to call *ā* a sound daddy, because he has a family not of boy children, nor of girl children, but of sound children.

In his family, daddy *ā* has ten sound children who each bear his name, although they do not all look like their daddy

Take your book, *Preparation Stage II*, and find the page which has on it the pictures of *spade, train, tray*, etc. There you see daddy *ā*'s sound family.

How many sound children has he?

Find his biggest sound child

Find those which look like himself. Point to the looking-picture of the train, and then the talking-picture belonging to it.

In the middle is a sound child marked underneath by a thick line. What is the name of that sound child? Why has it that name?

Each different type sound should be dealt with in a similar way, until children become familiar with the idea. They should then have frequent practice in building the words in the different type groups. When they do this quite readily the story book, *The Second Joyous Story Book*, should be given to them

Take your reading book and find the page which has the seaside picture at the top

In the story underneath the picture you will find many of daddy *ā*'s sound children, each one marked underneath with a thick line. You have heard me read this story to you. Now you may read it for yourselves

IV. Real reading matter.—*Joyous English* provides real reading matter from the first lesson

- (a) The first reading material provided in the story and vocabulary section is described in Section II. Here neither length nor difficulty of the words needs to be considered, as the recognition of the word is assured by the provision of an appropriate picture
- (b) When children have become proficient in sound-junction, and have been prepared by the play device described in Section III, to attack irregular words, the *First Joyous Story Book* is put into their hands. A typical story is given below. In each of these stories the irregularities are marked with an overlining T, as in the topsyturvy sound children described and illustrated in Section III

BIG BEN

(A short-sound story)

Big Ben is a monster clock that everybody in England loves. It lives in London at the top of a very big building on the banks of a river, and tells what o'clock it is in a lovely, silvery ding-dong. When it is sunny, men on the river bridge can watch its big minute hand jump along, but its tick-tock is lost in the rattle of cabs, taxis, trams and buses, that clatter across the bridge

On the other bank of the river stands a very big hospital, with hundreds of beds for sick men, women and children. It

must be pleasant for them to listen to the never-ending ding-dong of the clock, which helps them not to think of their sickness

- * (c) *The Second Joyous Story Book* consists of twelve carefully graded stories, each of which is associated with the sound families described in Section III. Before the first presentation of each of these sound families, the story is read by the teacher to the children, and after the children have become familiar with the picture set, they read the story for themselves

HOLIDAYS

Tom is so glad that he and his sisters have holidays. They will go in the train to the seaside when Mummy and Daddy can take them. Buckets and spades must be packed up, race-games, clay and paint-boxes, must go in as well, in case rainy days stop the children from playing by the sea.

When it is wet they will have lots of jolly games with Mummy and Daisy, the maid, but Daddy is not afraid of rain, so he will go straight to the sea to fish.

Lots of jolly children will be staying at the seaside, and Tom, Molly and the baby will have great fun with them. They will paddle, build sand-castles, catch shrimps and put them in a pail.

Mummy will tell them that they must obey Daisy, then she can stay with a lady and rest a little. One day they may have a lot of fun sailing little ships as they paddle at the edge of the sea. The ships will toss on the waves, and the spray will make them wet. When the sun sets, Mummy and Daisy will take them away, and at eight o'clock they will be tucked up in bed.

P-VOL III—G

V. The play element.—The personalities and affections of the home are projected into the school to introduce the play element as the basis of happy work.

Professor L. P. Jacks, the great educationist whose words describe so aptly the fundamental aim of this language and number progression, has much to say about play in his inspiring book on *Education Through Recreation*. In describing his views on work, he says, "In my conception of work, the idea of play is included. The finest kinds of work and the finest kinds of play are almost indistinguishable. The happiest man alive, if you could find him, would be the man whose work is his play, and whose play is his work."

From the very first language lesson to the end of the progression, children are first presented with the play devices which always precede and which provide a motive for the difficult mechanical work which cannot be avoided.

At the vocabulary stage, looking- and talking-pictures, sound children, left and right hand sounds, two little sound cousins, and hard and soft blowing sounds, successively make their appeal to the children.

At the constructional stage (sound-junction) sound children joining to make new talking-pictures, and topsy-turvy sound children provide the interest so necessary here.

At the long-vowel stage, the sound daddies and their respective families of sound children are a never-ending source of pleasure and interest. Real boys and girls have a home, so must sound children, and to provide this home and so carry on the play spirit, houses are provided. A typical one is here illustrated.

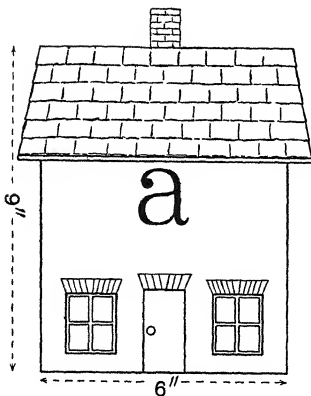
Material —Pulp-board.

Finished dimensions —

Front elevation, 9 in. by 6 in.

Side elevation, 7 in. by 6 in.

The lid, which is detachable, is shaped like a roof. The whole is painted in bright



colours, and is used for storing the different kinds of apparatus illustrating the language progression; e.g.,—

A story house for use with the vocabulary stage holds the looking-pictures and talking-pictures of the stories illustrated in *Preparation Stage I*.

A topsy-turvy house for use with the irregular word stage holds the word pictures found on pages 30 and 31 of *Preparation Stage I*, and additional words of each type which are added as they are found.

Twelve houses have to be provided for the sound daddies and their sound families, each with its own name, and fulfilling the function of dictionaries; i.e., the collection of as many words as possible of each type group sound.

These houses look most effective, three or four in each of the infant classrooms add an extra touch of brightness. They should be strong enough to be handled by the children, who will take care of them because they like them.

VI. A graded sequence.—*Joyous English* is a complete, logical and carefully graded sequence worked out in such a way that

children are never confronted with a difficulty for which they have not been prepared. This is arranged, not to prevent children trouble, but to prevent confusion, hesitation and contradictions which would thwart the first delicate processes of reasoning. Only the fact that the story books are so carefully graded makes it possible for children of six years to tackle such difficult material.

The sequence of the method is as follows —

Preparation Stage I —

- (a) Vocabulary work to extend and deepen children's language experience.

The material provided for this stage consists of twelve sets of looking- and talking-pictures, each one illustrating an interesting story. These sets are intended as guides, they do not provide enough material for the completion of their purpose (Illustrated under Section II.)

- (b) Concentration on regular initial sounds.

This is achieved by the use of an alphabet picture set which has the initial sound of each talking-picture heavily underlined. Sounds of special difficulty are impressed on the mind by three special picture sets (Illustrated under Section II.)

- (c) Concentration on sound-junction is

effected by the use of the vertical arrangement of beginnings of talking-pictures already familiar, and the formation of new talking-pictures by arrangement of the beginnings horizontally (Illustrated under Section III.)

- (d) Presentation of irregular short sounds

as topsy-turvy sound children, in a special picture set showing six different type irregularities of the simpler kind. (Illustrated under Section III.)

- (e) Presentation of thirty-one look-and-say words which cannot be illustrated,

but which must be learned because even the simplest story cannot be written without them.

The First Joyous Story Book sums up and expresses the sequence of work in *Preparation Stage I*. The great majority of the words used in these little stories are short-sound words, both regular and irregular. The irregularities are marked by the same kind of overlining as illustrated in the picture set of topsy-turvy sound children under Section III. In this book, for the first time, children not yet fully conscious of a reading sense are attempting to reproduce a record of continuous speech. The quicker children will read the stories without building, and even the slower ones can get on by building-up occasional words. It is far better for them to do this than to reel off "patter" of two- or three-letter words, or to repeat sentences after their teacher. The stories of this book are—*The Camel*, *Christmas Fun* and *Frolic*, *Big Ben* (illustrated under Section IV), *Red Indians*, *The Ugly Duckling* and *Cinderella*.

Preparation Stage II —

- (a) The presentation of more difficult topsy-turvy sound children illustrated by a picture set similar to the one shown under Section III
- (b) The presentation of long-vowel sounds. These sounds are arranged in twelve groups as sound children in the family of a sound daddy (Illustrated under Section III)
- (c) The presentation of silent letters as letters you must print but not sound; e.g., *b* as in *lamb*, *g* as in *gnome*, *k* as in *knife*.

The Second Joyous Story Book sums up and expresses the sequence of work in *Preparation Stage II*. As in the *First Joyous Story Book*, the order of presentation is carefully graded. Each story should be read to the children before the presentation of the sound family which it illustrates. After this has been done, children should read it for themselves. The stories in this book are as follows —

Holidays, illustrating long *a*
Dreamland, illustrating the various sounds of *ē*
Guy Fawkes Day, illustrating the various sounds of *ī*
Drake's Game of Bowls, illustrating the various sounds of *ō*
Little Rhymes, illustrating the various sounds of *ou* and *oy*
The Lonely Merman, illustrating the various sounds of *ir*
The Jackdaw of Rheims, illustrating the various sounds of *or*
The Shoemaker and the Elves, illustrating the various sounds of *oo*.
Hereward and the Great White Bear, illustrating the various sounds of *air*.
The Harvest of the Palm Trees, illustrating the various sounds of *ar*.
Duke William and Curfew, illustrating the various sounds of *ū*.

VII. Pictures as the link of association between known and unknown.—Picturing, and interest in pictures, are very strong human instincts, appealed to alike by the hieroglyphic writing of the ancient civilisations and by the modern cinema.

Though apparently a very simple device, this association of known and unknown through the suggestion of familiar pictures is the most vital part of the whole language progression. This was proved unmistakably by an experiment which was carried out some years ago (at the request of a medical man of repute) in an attempt to help a young man of nineteen years to learn to read. At the age of four and a half years, meningitis had left him with a dormant brain cell, and though his general intelligence was not impaired, all attempts to teach him to read utterly failed. Every known method was tried in turn by highly qualified and enthusiastic teachers, with absolutely no success. After a daily lesson of half-an-hour for three weeks using the looking- and talking-pictures of the alphabet set illustrated under Section II, he remembered and reproduced the talking-picture *lemon*

without its looking-picture. From that time, though progress through the sequence was painfully slow, he never looked back, and at the end of a year was able to read reasonably well. Three years later (at the time of writing) he had become a normally fluent reader.

According to medical testimony this quite unexpected result was achieved through the stimulation of the damaged brain cell by the association of looking- and talking-pictures.

VIII. Creative activity.—Creative activity is used right through the language progression to provide the apparatus necessary to illustrate it. Much of the apparatus made by enthusiastic teachers with so great an expenditure of time, energy and money, fails to provide a proper link of association because —

- (a) It has no connection with the living experience of the children
- (b) The children have had no share in its construction.

The same criticism applies to much (by no means all) of the apparatus which can be bought in such variety from those who cater for schools. Again, the toys which give most pleasure to children are the simpler ones which can be taken to pieces and put together again, or which provide scope for the "doing" of things. Over and over again parents have watched beautiful and costly toys which were meant to give pleasure, admired for a moment and then laid aside. The *Joyous English* progression requires none of the leisure time of the teachers who "play" through the reading with their children, to be spent in making sets of apparatus. It does need a plentiful supply of those materials which children can use in various ways to make the apparatus which will fulfil their needs.

Materials required.—Thin cardboard, pulp-boards, brightly coloured gummed paper

squares of various sizes, light-weight blackboards for children, coloured pencils, white, brown and neutral tinted drawing sheets, small pointed scissors, coloured plasticine, a set of alphabet letters for each child (These should be put aside, so that children do not see them until they are required for the first lesson in sound-junction). There should also be provided a cardboard cutter, and small, light-weight, cardboard boxes for holding scissors, pencils, chalk, etc.

The thin cardboard is used for cutting into strips about 2 in. wide and of varying lengths. The teacher must cut the strips from the sheet, but the children can quite easily cut these into the different lengths required.

The pulp-board is needed for the houses described under Section V. It cannot be handled by the children as it is too stiff. It makes excellent plasticine boards, and as they are much cheaper than the bought ones, they can be renewed frequently.

Activities associated with "Preparation Stage I."—

PRINTING—either on blackboards with coloured chalk or on the thin cardboard strips mentioned above. It is quite a good thing for the first attempts to be made on blackboards and later ones on the strips. The best may then be preserved in the story house and topsy-turvy house. For copying, use the talking-pictures of *Preparation Stage I* and the *First Joyous Story Book*.

DRAWING—the line pictures of *Preparation Stage I* with chalk, coloured pencil or pastel on blackboards or on white or neutral tinted paper. The best efforts should be preserved for use in matching lessons.

MODELLING—with plasticine any of the looking-pictures of *Preparation Stage I* with their appropriate talking-pictures. Children are keen on this activity which keeps them happily busy for long periods.

MATCHING WORK OF STAGE I—

1. The looking-pictures which have been saved from handwork lessons used in conjunction with the *Preparation Book I*, and the *First Joyous Story Book*. Each child should have five or six pictures and find in the books the talking-pictures belonging to them

2 The talking-pictures saved in story house and topsy-turvy house shared between the children who find in *Preparation Stage I* and the *First Joyous Story Book* the looking-pictures to which they belong

BUILDING GAME—with the alphabet sets. Provide each child with an alphabet set containing three or four of each letter

Here you have a number of sound children, but no looking-pictures, and no talking-pictures. You are going to play at making new word-pictures

Find in your box the beginning of *basket*, and put it beside you on your desk. Now the beginning of *ostrich*, and put it underneath. Next, two beginnings of *basket*. The beginning of *inshell*. Last of all the beginning of *nest*. There you have six sound children arranged underneath one another. They are the beginnings of talking-pictures which you know very well —

b
o
b
b
i
n

Beginning at the top, sound them very quickly for me. From your box take six sound children like those, and arrange them side by side. The six beginnings which you know have been made into a new talking-picture—*bobbin*. Sound it for me as quickly as you can

The children never tire of playing this popular game. It is of course essential that only regular, short-sound words should be attempted here.

Activities associated with "Preparation Stage II."—

PRINTING—1. Printing on blackboards with white chalk, or on strips with coloured pencil. Children are by this time able to print at a rapid rate and can make for themselves, as they attack each sound family in turn, all the type group sounds included in it. These can be preserved in large paper envelopes. Children also enjoy reproducing on their blackboards or on large white or brown drawing sheets, the whole of the looking- and talking-pictures of the several families.

2 Printing on strips of cardboard the underlined words in each of the stories of the *Second Joyous Story Book*. Each child can make a set for himself; the best in the class can be preserved in its appropriate house

For copying, use the *First Joyous Story Book* for the revision of topsy-turvy sound children, and pages 30 and 31 of *Preparation Stage I*. Also use for copying *Preparation Stage II* and the *Second Joyous Story Book*

DRAWING—on similar lines to that of *Preparation Stage I*. The work will of course be quicker and of a higher standard here.

MODELLING—1. With plastiline

2 With stiff paper to make simple models to illustrate objects mentioned in the two *Joyous Story Books*.

MATCHING WORK OF STAGE II.—

1 Simple type as described under matching work of Stage I as a means of constant revision of initial sounds and topsy-turvy type sounds

2 Similar work using *Preparation Stage II.* and the *Second Joyous Story Book*, the looking-pictures saved from handwork lessons, and the talking-pictures stored in the various family houses.

3 First type of matching *without* the aid of looking-pictures. The teacher prints on the blackboard in very large script one

of the "type" sound children, e g, *ai*. The children take a difficult story book, not either of the *Joyous* books. Begin at the first page, look for and then copy on your blackboard every word in which you can see the sound child I have printed on my board. The child who finds most words shall have cardboard strips and copy them out for daddy *ā* house.

Deal in a similar way with the other type sounds in each of the sound families, taking care not to ask children to search for those types of which there are but few examples, e g, the *ea* sound of *ā* (long) as in *great*, and the *or* sound of *ir* as in *worm* are not suitable for this exercise. It is no exaggeration to say that children revel in this puzzle-word game (as they like to call it), which changes the whole nature of the writing lesson and prepares a sound foundation for spelling later on.

4. A second type of matching without the suggestion of pictures is illustrated below. This work is much more advanced and should not be attempted until children have mastered the technical difficulties and become fluent readers. The *Joyous Story Books* should not be used for word searching. The underlined sound children are obvious, and the words containing them do not provide that element of mystery which is so potent a factor in arousing and maintaining the interest of children.

This repetitive work of matching the difficult group sounds with similar ones in ordinary reading books does away with any necessity for the noisy and ineffective collective vocal repetition of spellings, which has wearied so many children and teachers in the past.

Take your hardest story book, go very carefully through it, find and copy every word which has within it any of the sound children of daddy *ē*. Try to arrange underneath each other all those which look alike. The child who finds most shall copy them on cardboard strips to be saved in daddy *ē* house.

The children like best to copy these words on their blackboards for the sake of speed,

but for the purpose of collecting a big vocabulary they should sometimes copy them into exercise books kept for that purpose.

The time taken to progress through the whole of the *Joyous English* method as outlined above, must of course vary with the mental capacity of different types of children. A super-normal child, whose attendance is regular, frequently gets through all the stages in nine or ten months, and at the end of that time is able to read without mechanical stumbling any book of reasonable difficulty. An average child needs from eighteen months to twenty-four months to attain to the same proficiency. A dull and backward child needs from thirty to thirty-six months, but at the end of that time he is quite sure of his ground, because he has progressed from one stage to another at his own speed and with no contradictions to upset his almost negligible capacity for reasoning.

Though not ordinarily an infant school activity, spelling on the lines indicated below may be commenced with those quicker and brighter children whose progress through the language sequence warrants its being done.

The sound families and their application to the teaching of spelling.—When children have thoroughly mastered the mechanical difficulties of reading, a second presentation of the sound families is made.

- (a) At the first presentation children recognise and repeat the name sound of each type purely by association with the sound daddy, e g, the sound child *ay* in the talking-picture has the name sound of *ā* (long) as in *tray* because it belongs to daddy *ā*.
- (b) At the second presentation, children learn that the sound child *ay* has (besides the same family name as the other sound children of daddy *ā*), its own special names which are different from all the others, e g, *a*, *y*, says *ā* in *tray*.

Procedure—Each child in a real family has, besides his daddy's name, one or more names of his very own. Each sound child in a sound family has an own name as well as a family name. Find in your book the sound family of daddy *ir*. Point to the talking-picture which says *turkey*. In that word and many others very like it, which you must find for yourselves, *u*, *r*, says *ir*. Similarly.—

<i>Own names</i>	<i>Family name</i>
e, r, says	<i>ir</i> in mermaid, etc
e, a, r, says	<i>ir</i> in pearls, etc
o, r, says	<i>ir</i> in worms, etc
i, r, says	<i>ir</i> in birds, etc.

Matching work of the spelling stage—Take your hardest story book (not the *Joyous* ones), find and copy every word in which *ee* says *ē*. As you print, repeat the sound child's own name (as well as the sound daddy's name) to yourself. After children have gone carefully through all the sound families and the topsy-turvy type sounds in this way, natural, scientific and correct spelling will have become an accomplished fact. Not until this stage has been reached should continuous written composition be expected.

- (a) Mental defectives of a high grade can (with no limitation of time) be taught to read.
- (b) A child should never seriously start this language progression before the age of five, but at a much earlier age he may quite safely begin informal work with looking- and talking-pictures in order to provide an outlet for his legitimate interest in scribbling.
- (c) A free time table is of great importance. The teacher must use the greater part of her morning in dealing successively with the four or more grades into which children naturally fall. The matching work described above, and the preparatory stages of number work to be described hereafter, keep

the children happily busy while the teacher does this. The method can be used with great success by means of class lessons, though it was worked out in a school where free and individual methods have been in use since 1911.

NUMBER

The joyous approach to number was planned in the belief, that much of the poor work, which undoubtedly exists in arithmetic, is due to the following among several causes —

1 A wrong method of approach in the fundamental stages upon which all later work depends.

2 Insufficient and unsuitable repetitive experience, with consequent inaccuracy of the various kinds of tables which must be assimilated.

3 The lack of an appropriate link between unknown external abstractions and the internal living experiences of children.

4 Premature work in formal written sums before the essential foundations have been thoroughly mastered.

5 Too much dependence upon ready-made apparatus and too little use of the children's powers of creative activity. Everything that has been said in connection with the language progression about teacher-made apparatus, applies equally to the number approach, and having been said once need not be repeated.

The number progression of the kindergarten section is arranged in three, well-defined stages —

1. Recognition and notation of number groups.

2. Combination of number groups as a preparation for multiplication and addition.

3. Diminution of number groups as a preparation for subtraction and division.

Group recognition and notation.—As in the language progression, so in the number progression, the story is used as the link of association. The number- or figure-pictures should never at this stage be divorced from the familiar looking-pictures found in the various stories of *Joyous English Preparation Stage I*, e.g., with the looking-picture of a star are associated —

- (a) The talking-picture—*star*, which is already familiar to children.
- (b) A number word—*one*.
- (c) A figure talking-picture—*1*.



one

1

(a)

(b)

(c)

Procedure—Here is a typical lesson in group recognition. You all know the beautiful story of the first Christmas. Here is a looking-picture of the Star of Bethlehem. On the left of the picture is a talking-picture which you already know, on the other side are two talking-pictures, a number word *one*, and a figure-picture *1*, which you may have never seen before, but which you must try to remember. Take your reading book (*Joyous English Preparation Stage I*), and find the looking-pictures of the first Christmas Eve.

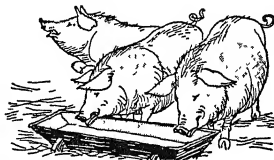
There you see a looking-picture of a star. Look at it for a moment, then draw it in the middle of your blackboard. You need not print the talking-picture *star*, but only the number word *one*, and the figure-picture *1*, both of which tell you **HOW MANY**.

Now take one of your cardboard strips. At the left-hand side colour a looking-picture of a star and beside this print the "how many" words *one* and *1*. You shall choose the best in a few moments and we will save it in the *How Many House* (See illustration, page 866.)

With one or two repetitions of such a lesson as that described above, the number

associations will be quickly grasped, and children can safely be left to apply them in turn to the many familiar looking-pictures of their reading book and to objects of their environment. When the dimension of unity has been firmly impressed in this way, children can progress to the next number group, which should be introduced as in the lesson described above, so that the form and name of the two number associations may be provided by the teacher.

A specimen strip of each of the number groups should be chosen from the children's own work, and preserved in the *How Many House*, e.g. —



pigs

three

3

Young children first recognise dimension through single and conspicuous objects of their environment, e.g., *one* mother, *one* daddy, *one* rattle, *one* crib. They gradually become familiar with larger numbers by grouping together single objects in their play.

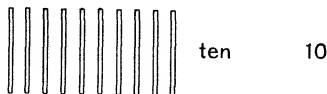
Though immediate group-recognition is of course the ultimate aim, children attain to this only by constant practice in drawing, modelling, or cutting the single objects which they join together to form the required group.

Notation of a number group of ten objects.—

At this stage it is a mistake to attempt to explain *place value*, yet children must be provided with figure-pictures to represent number groups of ten or more than ten objects.

A typical lesson of this stage—You all remember the story of the *Three Little Pigs*. Take your story book and find the looking-pictures belonging to that story.

Watch me while I make on my blackboard looking-pictures of nine of the sticks with which the second little pig built his stick house. I will draw one more stick beside the nine, then I shall have ten sticks. Beside the looking-pictures I print a number word *ten* and a figure picture *10*.



Now take ten sticks from your box and make them into a bundle, like the one in your reading book, by popping round them a small elastic band. I will make a picture of this on my blackboard.



The figure-picture *10* is much like the first figure-picture you ever saw, but to remind you that it tells of a larger number of things, it has two parts, and the bundle of sticks with its rubber band, like that which Mr. Man gave to the second little pig, will help you to remember this.

The figure-pictures from *11* to *20* are readily learned as—

- 1 bundle of sticks and 1 outside makes 11
- 1 bundle of sticks and 2 outside makes 12
- 1 bundle of sticks and 3 outside makes 13

As soon as each new figure-picture is perfectly familiar, it should be associated with large numbers of looking-pictures from *Joyous English Preparation Stage I* and illustrated by modelling, free-cutting and mounting, or drawing.

Group combination and notation.

(a) *Preparation for multiplication*—In the preceding stage, children have learned to recognise and represent by figure-pictures number groups of various dimensions. Now they are ready to go a step further and to join together two, three or more small groups to make a new and larger group.

A typical lesson of this stage—To-day you are going to be builders with two groups in each part of your building. Think once again of the story of the *Three Little Pigs*. Draw for me, at the top left-hand corner of your board, a looking-picture of one of the sticks with which the second little pig built his stick house. In the middle top part of your board draw for me another looking-picture of one stick. How many times have you drawn one stick? *Two times* or *twice times*. I will draw the same looking-pictures on my large blackboard. In the top right-hand corner I will print the talking-picture which tells me what 2 times 1 make.

// 2 times 1 make 2

Another and shorter way of printing the figure-picture *1* will put under the first one.

// $2 \times 1 = 2$.

The cross, which stands on two legs, is a short way of printing *times*, the two lines lying down close together are a short way of printing *are* or *make*.

Deal in a similar way with 2 groups of two, 2 groups of three, 2 groups of four, after which children should be able to continue the process for themselves without external help, and to extend it to building with 3 groups, 4 groups, 5 groups, etc.

In the early lessons of this stage it is advisable to stop at 2×6 , 3×6 , 4×6 , etc., and to leave the larger group combinations until the children have attained to some speed of calculation and notation.

By a ceaseless repetition of number experience children can be safely left to

tackle for themselves the lengthy process of assimilating the multiplication tables, which play so important a part in the quick and accurate working of formal sums. The teacher should, of course, be careful to check the various number groups and the result of their combination.

N.B.—The old-fashioned or “times” method of building tables is deliberately preferred for the following reasons—

1. It emphasises the essential principle of multiplication, i.e., the repetition of similar number groups a given number of times. The recognition of this principle by the children is most important when they come to deal with problem sums in this rule.

2. It enables children, as soon as they have mastered the twice-times table, to understand such a sum as 2×39 , when associated with a picture and group by the teacher on her blackboard. Children taught by the newer method could not understand the same sum, except by the process of inversion, until they have mastered the table of sevens and the table of nines. At every stage the *Joyous* approach to number is designed to impress the connection between concrete and abstract, any alteration of the structure of a formal sum, which the interchange of multiplier and multiplicand involves, cannot be allowed. Children of good mentality quickly realise that the results of 2×39 and 39×2 are identical, but to dull and backward children the use of this abstract truth is the cause of much muddle and confusion.

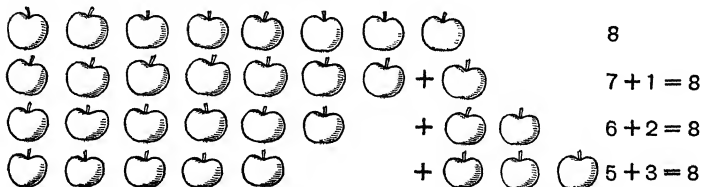
3. Although the working of formal sums by the children is not recommended during

the preparation stage, the working of a picture sum like those illustrated later in this scheme demonstrates the purpose of the table work upon which children spend so much of their time. This applies to each of the other stages of preparation.

(b) *Preparation for addition*—Having learned, in the previous stage, the process of joining number groups of the same dimension, children are now ready to attempt the more difficult process of joining number groups of unlike dimension. The first approach is made through one of the familiar number groups of stage I.

A typical lesson of this stage—With your plasticine, model for me 8 apples like those which the third little pig fetched from Merry Garden. Arrange them at the top left-hand corner of your board, and in the opposite corner put the figure-picture which tells you about them.

Model seven apples and arrange them beneath the others. How many apples have you in your second group? Model and place at a little distance from them, the one apple needed to make the eight apples of your first group. Model from your plasticine a cross standing on one leg, +, and place it between the seven group and the one group. (The cross standing on one leg is a short way of saying *and*.) At the right-hand corner of your board, print the figure-pictures 7 and 1, and between them place a cross standing on one leg. Now finish your figure-picture as you have learned to do when building your table groups.



Children quickly discover that each new arrangement of groups is made by moving one apple from the left-hand group and adding it to the right-hand group. They should be encouraged to repeat the figure-pictures in two orders, viz. —

$$\begin{array}{ll} 7 \text{ and } 1 \text{ make } 8 & 1 \text{ and } 7 \text{ make } 8 \\ 7 + 1 = 8 & 1 + 7 = 8 \end{array}$$

After a similar introduction to two or three number groups, children can be left to themselves to carry on the long and difficult process of assimilating the addition tables, until every possible number combination becomes perfectly familiar.

Diminution of number groups.—

(a) *Preparation for subtraction*—The first approach is made through one of the addition table groups

A typical lesson of this stage—Draw for me on your blackboard all the looking-pictures and talking-pictures which tell you about the smaller groups of group 9. Repeat slowly the first of the talking-pictures— $8+1=9$

Now rub out both the looking-picture and talking-picture of 1. How many have you taken away? How many have you left? Deal similarly with two or three more of the groups of 9.

I am going to print the talking-pictures of the groups of 9 in a new way —

$8+1=9$		1 from 9 leaves 8
$7+2=9$		2 from 9 leaves 7
$6+3=9$		3 from 9 leaves 6
$5+4=9$		4 from 9 leaves 5

By the time children have reached this stage of the number progression, such a statement as 1 from 9 leaves 8 is well within their grasp. The use of the minus sign,—, is deliberately ignored.

NB—At this stage children are encouraged to deal for the first time with number abstractions divorced from their concrete illustrations. It is most important that children should be perfectly familiar with their addition tables before they are allowed to make this advance.










(b) *Preparation for division*—Here the *Joyous Progression* of number departs absolutely from accepted tradition by using a special set of tables as preparation for division. This rule ordinarily presents such difficulty to young children that some mathematicians of repute recommend delaying its presentation even so far as the age of ten or eleven. For many reasons that is inadvisable, and as an alternative, which has been attended by great success, a special set of tables of preparation is used, in order that from the earliest stage emphasis may be given to the essential principle of division, viz. —

That it is a process of *breaking-up* of a large number group into smaller groups of equal dimension

The essential principle of multiplication is diametrically opposed to this and consists of the *junction* of small number groups of equal dimension into a larger group

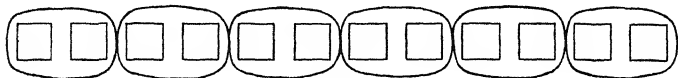
The real understanding of this difference of procedure is absolutely essential to the proper reasoning of a problem sum.

For this reason the *inversion* of multiplication tables to work division sums is absolutely forbidden in the highest interest of both teachers and children.

		+		$8 + 1 = 9$
		+		$7 + 2 = 9$
		+		$6 + 3 = 9$

A typical first lesson of this stage—Model with your plasticine twelve small bricks like those you have seen in the pictures of *The Three Little Pigs*. Place them at the left-hand corner of your board, and at the right-hand corner print the figure-picture which tells you about them

Now divide the *twelve* group into groups of *two*. How many groups have you? I will print on my blackboard a new kind of figure-picture and then you can copy it for yourselves

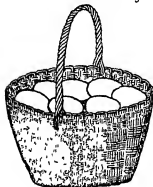


6 twos in 12

Now model nine bricks and divide them into groups of *three*. How many groups have you? In the opposite corner model the new kind of figure-picture which tells you how many *threes* in 9

Having become familiar with this new process children can finish the division tables for themselves, using as many varieties of material and as interesting a range of objects as possible. It is necessary to indicate the large number groups which children are required to break up, and this is done in the following way. Teacher prints on the blackboard a series of questions to introduce each new table—

How many *twos* in 2?
How many *twos* in 4?
How many *twos* in 6?



7



7



7

3 x 7 eggs

and so right on to the end of the table. For the first few lessons it is wise to remind the children that they must always construct the large number group *first*, and then proceed to divide, break up or share, it into smaller groups.

A kindergarten school should not concern itself with formal sums, so at this stage the *Joyous* number progression ends. The method has attempted to build in an atmosphere of happy creative activity, such a foundation of number notions, as will bear

without stress or strain the superstructure of formal arithmetic, which is the special concern of the junior school

The scheme of work outlined above provides sufficient number material for the whole infant school period for average children

In order that specially quick children may not be kept back, the transition from table to sum is indicated below.

(a) *Multiplication*—

There were 3 baskets with 7 eggs in each basket. How many eggs altogether?

$$\begin{array}{r} 3 \times 7 \\ 3 \\ \hline = 21 \text{ eggs altogether} \\ \hline \end{array}$$



17



17



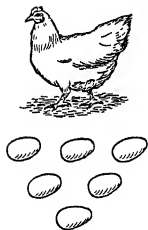
17

3 x 17 eggs

Billy, Tom and Joan each had a basket with 17 eggs in it. How many did they have altogether?

$$\begin{array}{r} 3 \times 17 \\ 3 \\ \hline = 51 \text{ eggs altogether.} \\ \hline \end{array}$$

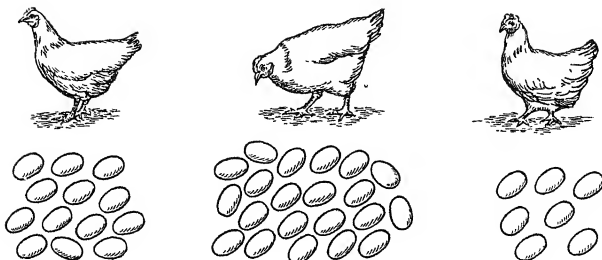
(b) Addition —



6 + 5 = 11 eggs

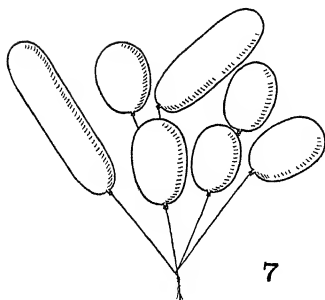
Our hen laid 6 eggs in a week, and another hen laid 5 eggs. How many altogether?

$$\begin{array}{r} 6 \\ 5 \\ \hline = 11 \text{ eggs altogether.} \\ \hline \end{array}$$



Billy's hen laid 13 eggs Tom's hen laid 21 eggs, and Joan's laid 7 eggs How many eggs did the three hens lay?

$$\begin{array}{r}
 13 \\
 21 \\
 7 \\
 \hline
 =41 \text{ eggs altogether.} \\
 \hline
 \end{array}$$



7

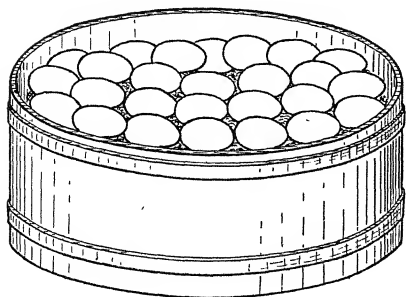
+

~~4~~

burst

Tom had 11 balloons. 4 burst. How many had Tom then?

$$\begin{array}{r}
 11 \\
 4 \\
 \hline
 =7 \text{ balloons left.}
 \end{array}$$



26 eggs

A grocer had a box holding 26 eggs. If 12 were broken, how many were *not* broken?

$$\begin{array}{rcl}
 26 & (2+4=6) & \\
 12 & (1+1=2.) & \\
 \hline
 =14 & \text{not broken.} & \\
 \hline
 \end{array}$$

TWO NUMBER RHYMES

One, two, three, four, five,
Once I caught a fish alive,
Six, seven, eight, nine, ten,
But I let him go again.

Why did you let him go?
Because he bit my finger so.
Which finger did he bite?
The little one upon the right.

This easy and well-known rhyme can be used for a number and modelling lesson. The children can make ten little fishes, put prices on them and sell them at the fish shop. Groups of ten can be put together in baskets, some can be sold and the remainder counted. Endless exercises in the four rules can be devised if all the children in a class make ten fishes each.

One man went to mow,
Went to mow a meadow.
One man and his dog
Went to mow a meadow.

Two men went to mow,
Went to mow a meadow.
Two men, one man and his dog
Went to mow a meadow

Three men went to mow,
Went to mow a meadow.
Three men, two men, one man
and his dog
Went to mow a meadow.

(Continue to ten men.)



CHILDREN'S DRAWINGS—THE THREE BEARS

1 THE LITTLE HOUSE ON A HILL
4 STOOL

5 WINDOW

2 BASIN
6 CANDLE

3 SPOON
7 BED

CENTRE OF INTEREST— THE WEATHER

XXIV. THE SUN



WHAT TIME IS IT?

Drawing in Outline of Picture No 29 in the Portfolio

Description of Picture No. 29.—This picture shows a charming park or garden scene. It is a summer day, the sky is brilliantly blue and the sun is shining. A circular patch of crazy paving is surrounded by a bed of smooth green lawn. In the middle of the paving stands a stone sundial on a pedestal. The words, *Time Flies*, are carved on the base of the pedestal. Two children, a boy and a girl, stand looking at the sundial. The sun casts a sharp shadow of the gnomon on the dial and of the children's figures on the lawn.

Beyond the lawn is a gravel path bordered on the farther side by a luxuriant flower border, the brilliant colours of which are set off by a background of green hedge. Sunflowers and delphiniums are recognisable among the many flowers in the border. A garden table and chair stand on the path.

A large, circular sunshade striped in yellow and white, with a deep fringed border, stands erect from the centre of the table.

The frieze below the picture shows children, alternately sitting and standing, holding coloured sunshades. Trace-outs for these figures are given on this page and the next pages. Half the number of children will require whole sheets of drawing paper with tracings of the standing child, while the others will need half sheets with tracings of the child sitting. Let the children first give their papers a water wash, then colour their figures, choosing any two colours for the child's frock and the sunshade. After colouring, they may cut out their segments along the dotted lines, and paste them edge to edge on the back of a strip of wall paper to make a similar frieze for the classroom wall.



TRACE-OUT FOR FRIEZE—SITTING CHILD

Trace this Drawing for part of the Frieze, Picture No. 29.



TRACE-OUT FOR FRIEZE—STANDING CHILD
Trace this Drawing for part of the Frieze, Picture No. 29

LANGUAGE AND SPEECH TRAINING

Conversation on Picture No. 29.—The children will need previous practice in tracing shadows and an understanding of the use of the sundial before discussing this picture. They should then freely describe and discuss it. To stimulate thought and observation, and to bring to the notice of the children any points overlooked, the teacher may make some of the following suggestions—1. What place is shown in the picture? 2. What time of the year is shown in the picture? 3. What stands in the middle of the picture? 4. What does a sundial tell you? 5. Of what use is the little slanting metal rod (gnomon) of a sundial? 6. Can you tell the time by a sundial when the sun is not shining? 7. Say what is written on the base of the sundial. 8. Tell who are looking at the sundial. 9. Give a name to the boy, e.g., *Ronny*. 10. Give a name to the girl, e.g., *Joan*. 11. Find Ronny's and Joan's toys. Say what they are. 12. Tell what colours you can see among the flowers. 13. Why has the table a sunshade over it? 14. Tell what you see in the border under the picture.

Flash Cards.—The following sentences might be written on strips of card—

1. Joan is looking at the sundial.
Ronny is looking at the sundial.
Joan is Ronny's sister.
Ronny is Joan's brother.
2. The sundial is made of stone.
In the top is an iron rod.
The sun shines on the rod.
The rod casts a shadow.
3. The shadow moves round the sundial.
When the shadow is shortest it is noon.
The shadow is long in early morning.
The shadow is long in the evening.
4. We use clocks to tell the time.
Some clocks hang on walls.
Grandfather clocks stand on the floor.
Watches are worn on the wrist.

Choose the right word.—Write the following on the blackboard or on cards and let the children rewrite the sentences, choosing the right word to complete each sentence by reference to *Picture No. 29*—

1. A sundial is made of (wood, stone, bricks).
2. A sundial tells us the (day, month, time).
3. Over the table stands a (sunshade, umbrella, blind).
4. A sundial tells the time only when the sun (rises, shines, sets).

Rhyming words.—Let the children supply the missing words—

1. Twinkle, twinkle, little star,
How I wonder what you are,
Up above the world so high
Like a diamond in the — (sky).
 2. Tick, tock, tick, tock,
Listen to the big — (clock).
Listen to the ticking of the big, big
— (clock).
 3. Robin and Richard were two pretty
men,
They lay in bed till the clock struck
— (ten);
Then up starts Robin and looks at the
sky,
Oh, brother Richard, the sun's very
— (high)!
- You go on with bottle and bag,
And I'll follow after on jolly Jack —
(Nag).

Note—The children will like to act the last rhyme. Two boys, Robin and Richard, can pretend to lie in bed asleep, a third boy sounds ten strokes on a bell, a fourth boy, can hoist on a map pole a round red sun cut from paper. Robin and Richard sit up at the sound of the "clock", Richard repeats the last three lines of the rhyme, and both jump out of bed, Robin fetches a "bottle and bag" and hurries off out of the door, Richard gets on his "horse" and follows with a trot-trot

What the sun does.—Encourage the children to tell what the sun does; e.g.,—
 1 Shines in the sky. 2 Keeps us warm
 3 Tans our skin. 4 Keeps us healthy
 5 Ripens the fruit. 6 Opens the flowers
 7 Makes plants grow 8. Makes shadows
 9. Rises in the east. 10 Sets in the west
 11 Dries the roads 12 Whitens the washing

Reading and drawing.—Let the children draw their own pictures to illustrate the following riddles and rhyme —

1. I have a little sister,
 They call her Peep, Peep.
 She wades in the water,
 Deep, deep, deep,

She climbs the mountains,
 High, high, high—
 Poor little sister!
 She has but one eye

(Answer A star)

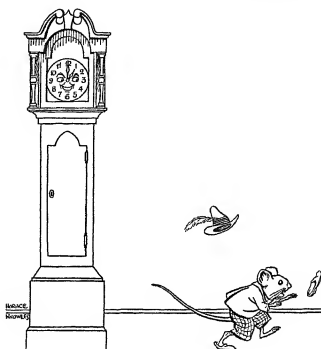
2. Little Nanny Etticoat,
 In a white petticoat,
 And a red nose,
 The longer she stands
 The shorter she grows

(Answer A candle)

3. Hickory, dickory, dock!
 The mouse ran up the clock

The clock struck One!
 The mouse ran down.
 Hickory, dickory, dock!

Old Rhyme.



Individual reading cards.—This description of *Picture No 29* can be hectographed for children's individual reading —

Ronny and Joan go to play every day in a big park. In the class picture you can see Ronny and Joan in the park.

There is a sundial in the park. The sundial is made of stone. It has a flat top. The top has numbers all round, as a clock has. A metal rod sticks up in the middle of the top.

When the sun shines the rod makes a shadow. The shadow points to a number and tells what the time is. The sundial tells the time only when the sun shines. When the sun goes in the sundial tells nothing at all.

Ronny and Joan have put their toys on the grass. The sun is shining brightly, so they are looking at the sundial.

"What time is it?" asks Ronny.

"Three o'clock," says Joan.

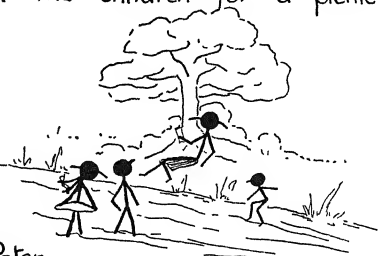
The sundial stands on a green lawn. A path runs by the lawn. On the path stands a table with a big sunshade. A

A Sunny Day



One sunny day Jane put
on her shady hat and
took the children for a picnic.

Jane sat under
a tree and read
her book, while



Dick, Dot and Peter
paddled in the brook.



They had their tea
in a wood.

While they were out, Jim
took Mother and Father and
Baby Betty for a ride in the



car.

chair stands by the table. Behind the path is a bed of lovely flowers. In the border under the picture there are little girls with coloured sunshades.

Talks to the children.—Many interesting and informative talks can be held in connection with the *Picture No 29*. We can think of the sun as the life-giver, warming the earth and making the plants, animals and people grow. The children will readily talk about the sun's work. They can tell of their summer holidays when the warm sun tans their skin, they will know the names of some flowers that close their petals when the sun goes down, they will know how the sun ripens apples, pears, plums and other fruit, they will have observed how mothers take out their babies in the warm sunshine.

The sundial in the picture will lead to talks about time-givers, such as those here illustrated—clocks, hour-glasses and candles. Here will be given an opportunity to demonstrate how the direction of the shadows cast by the sun can be arranged to give the time of day. (See *Constructive Work* page 891.) Most children will have seen an egg-glass which gives the time for cooking an egg, and they will be interested to hear about the old-time hour-glasses which were in common use before clocks were universal. The story of King Alfred's candle clocks will make a happy link with history of the past. (See page 897.)

A talk about the cardinal points will naturally be associated with the sun. The children will know where the sun shines on the school at morning, at midday and at closing time, and will understand how useful the sun is to help men to find their way about the world. This talk may lead to others connected with the moon and stars which help to give direction at night.

Drawing.—Very effective drawings illustrating the phases of the moon can be made using blue-grey pastel paper and chrome yellow pastels. It will be sufficient to show

four phases of the moon, and two sets of each will be needed to show the coming and going of the moon.

The sets should be arranged from the children's own observations of the moon—



TIME-GIVERS
CLOCK SUNDIAL HOUR-
GLASS CANDLE

a diary should be made giving the necessary information about the moon when it rises early in the evening, before "bed time". The children will notice that the first quarter

and first half of the moon come on the right hand side, and the moon grows from right to left till it is a full moon. Then it gets smaller and smaller until half-moon time,—when the moon occupies the left

half of the circle. The size of the moon continues to diminish till it reaches the last quarter on the left hand-side. It then dwindles away to nothing, and we lose the moon for a few nights.

ACTIVITIES AND CONSTRUCTIVE WORK

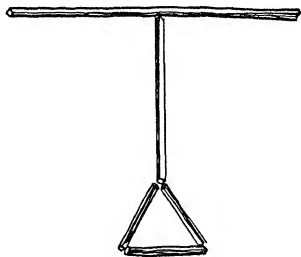
Classroom project — observation of shadows.—On a sunny day the children can be required to notice and to write down the answers to the following questions, which may be written on the notice board or blackboard —

Find out when your shadow is —

- 1 Short and fat
- 2 Long and thin
- 3 In front of you.
- 4 Behind you.

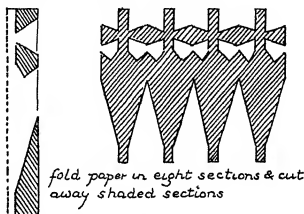
All the children may take part in making a sun clock, as described on page 891

Stick laying—candle, electric light, etc.—The Fives can make pictures of the sun, stars, a candle and stick, and an electric light, the last of which is shown in the sketch



Paper cutting—frieze of sunshades.—Fold a rectangle of coloured paper, about 3 in by 4 in., into eight strips. With scissors

cut out from the folded paper half the shape of the sunshade, as shown in the diagram, taking care that sufficient uncut paper is left at the edge to keep the shapes together. The unfolded paper gives a series of sunshades which may be mounted on a differently coloured background



Paper cutting—clock faces (exercise on telling the time).—Make the clock face from a 6 in.-square of plain, white paper. The teacher may draw the outline of the face with a pair of compasses. Place the papers one above the other, find the exact centre of the top piece and set the compasses to the required size. Then pierce several papers, so that the correct centres are already found and time is saved in drawing the circles. Let the children cut out their circles round the pencil lines. The older children may fold squares of paper into quarters and curve the outside edge of the paper with scissors, making a rough circle. These folds will also help in spacing the figures on the clock face.

Paste each circle to a sheet of brown paper as shown in the sketch, leaving a

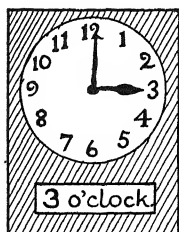
larger space below the clock face than above. Then insert the figures on the face in this order—12, 6, 3, 9. Folding the paper circle into quarters as suggested, before sticking it down, will greatly assist the children in spacing the figures. The remaining figures, 1 and 2, 4 and 5, 7 and 8, 10 and 11, are then added. The hands of the clock are drawn directly on the paper face, each child being given an hour to set. For the first lesson, clocks pointing to the hours,—one o'clock, two o'clock, etc.—should be set. The time shown is written below the clock, as illustrated in the sketch, Fig. 1.

Next, the clocks are made as before, and the children are given different half hours to set,—half past one, half-past two, etc.—see Fig. 2. Care must be taken to draw the hour hand midway between the figures. The whole set of twenty-four clocks showing the hours and half hours can be selected from the best work of the class and set up to make a wall frieze.

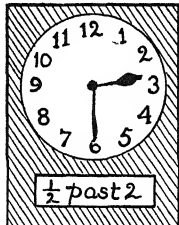
The quarter hours are more difficult to show, but the older children should be able to place both hands correctly. An old clock, which the children may adjust to different times, will greatly help their understanding of the position of the hour hand. The fractions of the hour should be written— $\frac{1}{4}$ -past 1, $\frac{2}{4}$ -past 1, $\frac{3}{4}$ -past 1, at first, Fig. 3. Later on $\frac{3}{4}$ -past may be changed to $\frac{1}{4}$ -to, Fig. 4.

Paper cutting—team clocks.—In many games and activities the children work in teams, and clocks may be made to record the marks gained. The clock face for each team is made of paper the team colour, and discs of similarly coloured paper are pasted in the squares below the clock face, as shown in the sketch. The clock face is made as previously described, divided into twelve, and fitted with a single hand attached by a paper clip. The squares below the clock face may be drawn on the mount, or a piece of squared paper may be pasted on. Each mark is recorded by moving the hand on the clock face to

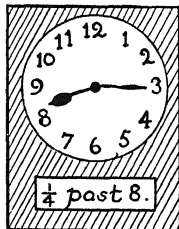
1.



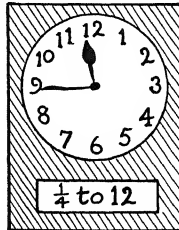
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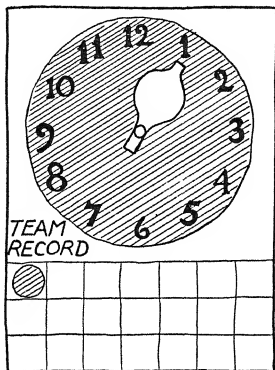
3.



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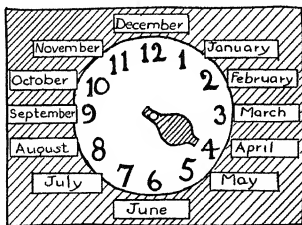


the next number, and by adding another disc to the squares.



Paper cutting—calendar clock.—A monthly clock is made in the same way as those already described, the face being divided into twelve. The names of the months may be written on the background paper, or labels may be pasted on, as shown in the sketch. A cardboard hand is cut out and fixed at one end by a paper clip to the centre of the face.

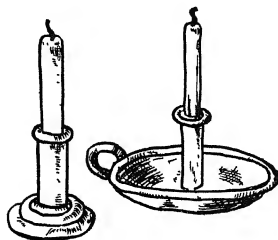
A daily clock can be made similarly and hung beside the monthly clock, or the two can be mounted on one paper. In making the daily clock the teacher will



give help in spacing the seven positions on the clock face.

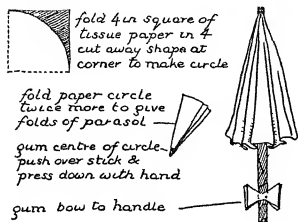
Such a pair of monthly and daily clocks form an instructive and useful calendar in the classroom and may be made as a group model.

Plastic model—candle and stick.—For the candle take a ball of white plasticine and roll it into a stick. To make a particularly slim, firm candle, the older children can wrap a covering of plasticine round a match stick and roll it smooth. For the candlestick make a flattened oblong of coloured plasticine and wrap it round the bottom end of the candle. Make a small ball of plasticine, roll it into a "worm" and fix it round the top edge of the stick. The Fives can make the base of the candlestick from three balls of plasticine of varying sizes, rolling them into three "worms" and placing them one outside the other, beginning with the smallest. The older children can hollow out a ball of plasticine to make a thick saucer with a long "worm" round the top and a handle at the side. The wick of the candle is a fragment of black wool pushed into the candle top with the point of the modelling tool.



Paper model—simple sunshade.—Take a square of tissue paper about 4 in across. Fold it in four and cut away a curve at the corner to make a circle, as shown in the diagram. Fold it twice more to crease

the parasol. Unfold the paper, put a smear of gum in the centre of the circle and then press it over the end of a paper stick, which is made from a 4 in square of thin brown paper, pasted and rolled diagonally. Press



the paper cover into its folds by passing the parasol through the hand. Cut out a tissue paper bow from folded paper and paste it over the handle. The handle may be a thin stick or wooden skewer.

Co-operative group model—sun clock.—

A bright sunny day is necessary for the making of the sun clock. A kindergarten table covered with a sheet of cartridge paper forms the face, or dial, and an upright stick fixed in a cotton reel makes a good shadow stick. The shadow lines cast by the stick hourly from 9 a.m. to 4 p.m. are marked in coloured pastel, and the corresponding hour figure is written at the end of the line.

STORIES TO READ OR TELL

THE MAN IN THE MOON

ONE Sunday morning an old man went to a forest and cut some firewood. He tied the sticks into a bundle, which he put on his shoulder. Then he began to trudge home. While he was on his way an angel came and stopped him.

"Do you know," said the angel, "that this is Sunday on earth, when all men rest from work?"

"Sunday on earth, or Monday in heaven," said the old man, "it's all the same to me."

"Very well, then," said the angel, "as you do not keep Sunday on earth you shall live in a Moon-day in heaven. There you shall stay and carry your faggot of firewood for ever and ever."

When the angel had said these words, the old man rose up to the moon, and there, on a clear night, you can still see a great shadow, as of a man carrying a bundle of sticks on his shoulder.

Days of the week.—In connection with this story the teacher might have a chat about the origin of the names of the days of the week. *Sunday* was the day when our forefathers, the Saxons, worshipped the sun, *Monday* was the moon's day; *Tuesday* was the day of Tiw, the god of war; *Wednesday*, the day of Woden, the greatest of the Saxon gods, *Thursday*, the day of the great god Thor, the god of thunder, *Friday*, the day of the goddess Frigg, the wife of Woden, and *Saturday*, the day of the planet Saturn.

The following rhyme could be learned by the Sevens, who should write it in their books for reference in spelling the names of the days.—

Solomon Grundy,
Born on a Monday,
Christened on Tuesday,
Married on Wednesday,
Took ill on Thursday,
Worse on Friday,

Died on Saturday,
Buried on Sunday,
This is the end of
Solomon Grundy



BILLY BOY

MOTHER held her baby in her arms and rocked him to and fro "Go to sleep, Billy Boy, go to sleep," she said "The sun will soon set and the moon and the stars will come out" His eyes were wide open and he would not go to sleep By-and-by he began to cry. "What is it Billy Boy? What is it?" mother asked The round red sun began to sink and Billy Boy held out his hands to it There was a rosy glow in the sky A golden sunbeam came into the room and on it sat a fairy.

"Is the baby crying for the sun?" asked the fairy. "Dear little pet! I will get it for him" She flew away, up, up, up, but she could not get the sun out of the sky. It was too hot to hold Poor Billy Boy cried more than ever. By-and-by the moon rose, and Billy Boy held out his hands, as he had done to the sun A moonbeam came into the room with a fairy sitting on it.

"Is the baby crying for the moon?" asked the fairy. "I will soon get it for him." She flew away up to the sky, but she could not get the moon It was too cold for her hands

Mother rocked Billy Boy to and fro and still he cried, "Boo-hoo! Boo-hoo!" When the silver stars came out they looked in at him, and ever so many star fairies flew into the room

"Is the baby crying for the stars?" they asked "We will get him ours" Away they all flew, but they could not get the stars out of the sky. The sharp points of the stars hurt their soft fingers. Billy Boy cried more and more In a corner of the room, the old Teddy Bear sat on the toy box He was lonely, and wanted Billy Boy to look at him At last Billy did look, and mother said, "Do you want your Teddy, dear?" She put him into baby's arms "Goo-goo," said Billy Boy He cried no more and soon he shut his eyes and was fast asleep. The fairies were glad when Billy Boy fell asleep.

Drawing.—Most children like drawing fairies, especially if they may use water colour or pastel. Divide the class into three groups, one group can draw a fairy trying to reach the sun, a second group can draw a fairy trying to reach the moon, a third can draw many fairies trying to reach the stars

Some children will like to draw the Teddy Bear. There is a class picture of *A Live Teddy Bear*, No. 47 in the portfolio.

WINGS

LONG ago a boy wished to fly like the birds. He said, "Please, father, make me wings. I want to fly like the birds and the bees." His father set to work He made two wings for his son and fixed them to his back with wax. Up into the air he flew. The bees flew round him

"Buzz, buzz," they said, "do not fly so high, but stay here with us" The boy would not stop Up and up he went, and now the birds flew round him.

"Tweet, tweet, sweet, sweet," they sang to him "Do not fly so high, but stay and play with us" The boy would not stop He flew up and up, till there was none so high in the air as he

"I will fly up to the sky and go to see the sun," said he. He forgot that the sun was very hot, and his wings were only fixed to his back with wax. The wax began to melt. He could not use his wings. He fell down, down, down, till he hit on a rock. He was not hurt, but his strong wings broke, and he could never fly again.

Speech training.—In order that the children may fully appreciate this story and to give them practice in speaking, the teacher might ask the following questions.—
 1. What is the beginning of the story about?
 2. Why did the boy ask his father to make him wings?
 3. What did the boy say to the father?
 4. How did the father fix the wings to the boy?
 5. Talk like the bees.
 6. What did the bees say to the boy?
 7. Talk like the birds.
 8. What did the birds say to the boy?
 9. Why did the boy fly so high?
 10. What happened high up near the sun?
 11. What does the end of the story tell us?

TOO-TIMID AND HIS LITTLE CLOCK

TOO-TIMID was a little man who lived in a new little house in the Winkle-Twinkle Wood.

He had a mat which he laid down, one-two-three, a clock which he wound up, four-five-six, and a cap which he put upon his head whenever he went to market.

One day, as Too-Timid was sitting on his mat warming his toes, he heard his clock stop going tick-tock, tick-tock, and go tick-tick-tock, and then tick-tock-ticka-tick. So he knew that something was the matter. And he looked up at the clock, which was on the mantel, and he saw that it was telling quite the wrong time. That was dreadful, for it had never done such a thing before. And just as poor Too-Timid was thinking about how dreadful it was, the clock stopped tick-tocking and did nothing.



Then Too-Timid got up, and looked at his clock very earnestly, but it seemed quite the same as it always had been.

Now he knew that it did not need winding, for every night he wound it up, one-two-three, and set it again upon the mantel.

So he said, "Oh, dear, dear, what is the matter with you?"

And the clock replied at once in a huffy little voice, "Nothing very much, only this, that I need a holiday."

"A holiday?" cried Too-Timid.

And the clock replied, "Yes, of course! *Everybody* has a holiday at some time or other, and now *I* need one. I can't see anything surprising about *that*."

Then Too-Timid thought and thought, and really he could not help seeing that his little clock must need a holiday. So at last he said, "Very well, you may have one." And he sighed.

The little clock went brr-r, for it was as pleased as anything; and it said, "And may I go where I please, master?"

And Too-Timid said, "Yes. But do not go too far away, for I shall be lonesome."

The little clock went brr-r-brr-r, for it was still more pleased, and it said, "And may I stay away as long as I please, master?"

And Too-Timid said, "Yes. But do not stay away too long, for I shall be lonesome."

And then the little clock shot out two little green legs and ran away and disappeared.

Then Too-Timid began to wait and wait.

That was a dreadful time, for, oh! how lonesome it was without the little clock's tick-tock, tick-tock.

Then one day passed, and then another, and then another. But the little clock did not come back. Lots of times Too-Timid opened the door and looked out, but he could see only the leaves and trees in the Winkle-Twinkle Wood.

Then one evening, after he had locked the door, and just as he was going to lie down on his little mat, Too-Timid heard

a chirpy cheery sound. And that was his little clock going "tick-tock, tick-tock, tick-tock."

Then Too-Timid gave a great shout of joy, and he looked up, and there was his little clock in its old place on the mantel, and the time it told was exactly right.

"Now that I have had a holiday and have seen the world," said the little clock, "I am glad to be at home again, and to go tick-tock, tick-tock. For this little house is the coziest spot that I have ever seen."

"Tell me about your travels," said Too-Timid.

But the little clock said, "I will tell you about them in the long winter evenings as I go tick-tock, tick-tock, tick-tock."

And that is just exactly what the little clock did. And for aught I know, Too-Timid may be sitting on his mat now listening to the stories of the little clock.

Agnes Grozier Herbertson

Play.—Let the children mime actions or imitate sounds based on the story, as follows —1. Lay down the mat saying one-two-three. 2. Pretend to wind a clock saying four-five-six. 3. Show how Too-Timid sat on his mat and warmed his toes. 4. Talk like the clock. 5. Look at the clock very earnestly. 6. Say, "Oh, dear, dear, what is the matter with you?" 7. Say "brr-r" like the clock. 8. Open the door and look out. 9. Give a shout of joy.

BUBBLES

IT was a lovely sunny day. The garden was full of flowers, and there were bees and butterflies and birds everywhere. Yet Anne felt just a little bit unhappy. She knew she should be feeling bright and cheerful on so lovely a day, but her little friend Betty from next door had gone away to the seaside for a fortnight, and Anne couldn't help wishing she might have gone too. It was so dull without anyone to play with.

Anne fetched out her dolls and dressed them all in their best clothes, but they wouldn't *do* anything, they just stayed where you put them and stared at nothing. When Betty was there, of course, it was all different. Then the dolls seemed really to take part in the game, but to-day they all seemed a little stupid, and she couldn't think of another thing to do. Just then mother called from the house, "Anne dear, come and see what I've found!"

Anne went running to her mother, and what do you think it was? Her bubble pipe and bowl that she had packed away last summer and forgotten all about.

Anne clapped her hands, "Just the thing," she cried. "I was getting so tired of my own company, mummy."

"Never mind, your friend Betty will soon be back again," she said. "Now let us go to make some soapsuds for your bubbles." So they found some soap flakes and poured warm water on them in the bowl and stirred and stirred till the flakes were all gone. Then Anne took her little chair, her bowl and pipe, into the garden, and sat down to blow bubbles.

There was a tiny breeze and the sun still shone brightly, so the bubbles took on all the colours of the rainbow, as they gently floated away. One after another Anne blew the bubbles, lovely big ones, and watched each one till it burst.

"What a pity they don't last longer!" she said to herself. "They are so pretty, I wonder what happens to the colours when they burst—I *wish* I knew!"

"Do you my dear?" asked a tiny voice close beside her.

Anne looked round in surprise and presently she spied a dainty little fairy swinging to and fro on a Canterbury Bell near by.

"Would you really like to know what happens to your pretty bubbles, Anne dear?" asked the fairy.

"Oh, yes please, I *should*," said Anne, who was rather surprised to find a real live fairy in her own garden. Of course she

knew all about fairies and hoped to find one some day, but she supposed that she would have to look very carefully in the woods, far away from houses, so it really was rather surprising to see one swinging on her own particular Canterbury Bell.

"Perhaps they come only when you are *not* looking for them," thought Anne.

Then the fairy flew down from the Canterbury Bell and settled herself on Anne's shoulder.

"Now," she said, "you blow a bubble and I'll touch your eyes with my fairy wand, so that you can see what happens."

Anne took up her pipe and very carefully she blew the biggest, most beautiful bubble she had ever made, and just as it was ready to sail away the fairy reached up and touched her eyes.

"Now watch," she said. So Anne looked carefully at the bubble and found she could see strange things going on inside it. First she saw a tiny shadow at the bottom of the bubble, and as she watched, this shadow grew, and as it grew it took on the shape of a tiny fairy sitting crouched up with her arms round her knees. Clearer and clearer grew the fairy shape and Anne could see the wings forming and growing larger every minute.

At last the fairy shape seemed complete and now it was as large as the bubble itself and began to look like a real live fairy. Suddenly this new fairy stood up and stretched herself. There was a pop! The bubble had gone! But the new fairy flew down and settled on Anne's hand and murmured, "Thank you, Anne!"

Anne looked rather bewildered, so the first fairy explained, "That's how new fairies come into the world, Anne dear! Every time a child blows a beautiful bubble a new fairy is born, and the bubble bursts when the new fairy first stretches herself. Of course, only those who are friends of the fairies are allowed to see what really happens."

E. Boleth.

A STORY FROM HISTORY

ALFRED THE GREAT



SCENES FROM THE STORIES OF ALFRED THE GREAT

ALITTLE more than one thousand years ago a famous king named Alfred ruled in England. This king became so famous for his fighting, his learning, his kindness and his good deeds, that he has always been known as Alfred the Great.

Alfred was a young man only twenty-two years old when he became king. His crown brought him many sorrows, for at that time the fierce Danes sailed round the shores of England, over-ran the country, burnt the houses, and robbed and killed the people. Alfred's early life as king was

given up to fighting. He lost several battles and was obliged to pay gold to the Danes to go away. But they came back again and again. Once Alfred's soldiers fought so bravely that they took away from the Danes their famous war-standard or banner called *The Raven*. This banner was supposed to have magic power. The Danes believed that when victory was near the great black bird on the banner fluttered its wings, but when the Danes lost the battle the bird hung still and drooping. But again the Danes came back fighting, burning and killing as before. King Alfred, his queen,

and her children had to hide in the Isle of Athelney, a spot of marshy ground in Somersetshire. It was such a good hiding place that those who knew the way could get to the spot only in a small boat. A great wood of alders covered the marsh and hid Alfred and his soldiers from their enemies. Deer roamed about the woods.

Alfred as a minstrel.—There were no newspapers in those days to tell the people about their king, but many songs were sung by the minstrels telling of what happened at this time. The minstrels were so proud of their king that they often made up stories and songs to show the people who listened to them how great their king was. One of the old songs tells how King Alfred dressed himself as a minstrel, and went into the Danish camp night after night singing songs to the soldiers and playing on the harp. At last the supposed minstrel was taken into the tent of the Danish king Guthrum. Here the pretended minstrel sang to Guthrum and at the same time found out what were Guthrum's plans, how many soldiers he had, and what they intended to do. Perhaps the story is true, nobody really knows. If it is true, it was a very brave deed for the king to go into the enemy's camp to find out all he could.

Alfred and the beggar.—Another pretty story tells how King Alfred was sitting with the queen alone in his secret hut in the Athelney marshes. A beggar man came by and asked for a piece of bread, for he was starving. The king shared with the beggar his last loaf and a little wine left in an almost empty jug. Suddenly the beggar vanished, and lo! the loaf was still unbroken and the jug was full of wine to the brim! That night in a dream again the beggar appeared to the king and told him that he would shortly drive out the Danes from England. The king believed that the beggar was none other than Saint Cuthbert, the famous Saxon saint.

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Alfred defeats the Danes.—After leaving his hiding place in Athelney Alfred never again lost a battle, and he fought the Danes right across England. When the Danes came on horses, Alfred put his soldiers on horses. The Danes came over the sea in warships, but Alfred built bigger and better ships, and sent them to drive away the ships of the Danes before they could reach the land. At last the country had peace, and the people no longer lived in fear of the Danes.

After being a great fighter, King Alfred became the greatest friend of peace. He made good laws so that no one should be badly treated, and all his people could live happily. If any man broke Alfred's laws, he was brought before judges, who would see that justice was done. No man was allowed to hurt another.

Alfred's candle clock.—King Alfred was a very hard-working man. He wanted to divide the twenty-four hours of the day so that he could give a fair share of time to work, another share to hunting, eating, talking and singing, and a third share to sleep. As there were no clocks to tell the time, the king had candles made with iron rings round them. The time taken to burn from one ring to the next was an hour. With his candle clocks the king divided each day into eight hours for work, eight hours for pleasure, and eight hours for sleep.

Many draughts blew through Alfred's home, for glass had not then been made to use for windows. These draughts blew the flame of the king's lamp backwards and forwards when he wished to read. Then King Alfred invented a candle shield made of horn, so that he could see to read and study better.

It is rather sad to know that all his life King Alfred had an illness which gave him great pain at times. We admire him all the more because while he felt great pain, he still went on just the same, working hard to help his people in every way.

Alfred writes books.—When Alfred was a little boy, his mother taught him to sing the old Saxon songs. He loved music and singing and learned to play the harp. One day his mother showed little Alfred and his brothers a very lovely book full of Saxon poetry, it was a truly wonderful book in beautiful colours, red, blue and gold all done by hand, and with bright pictures. The queen said, "I will give this beautiful book to the boy who first learns what is in it."

Young Alfred cried "Will you really give that book to the first of us who can understand and recite it?"

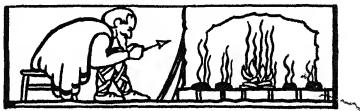
"Yes, my son, I will," answered the queen.

Some time after, Alfred came to his mother and said "Now hear me read the book." Then he recited the poems aloud, and the wonderful book became his.

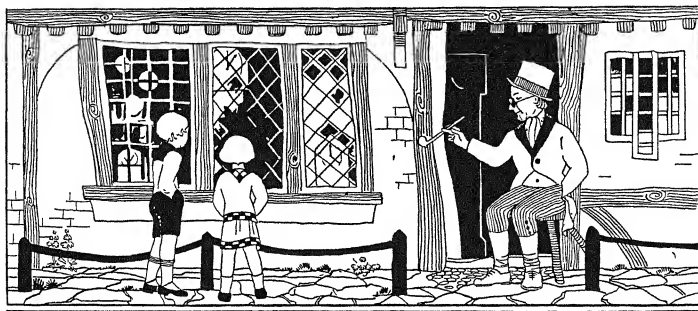
Not many years ago a beautiful picture was painted by Sir Frederick Leighton showing the young Alfred and a brother listening to their mother reading from a wonderful book. As the boy Alfred listens he gazes at the bright pictures and the letters drawn in gold and scarlet and blue. Both boys have their golden hair bobbed, with a fringe over the forehead. Their eyes are blue and their faces are fair with rosy cheeks. Each wears a pretty tunic with long sleeves, and a belt round the waist. Long white trousers cover their legs, but over these trousers garters are criss-crossed and fastened under the knees. Shoes of soft leather fit their feet neatly and are fastened over the instep with several straps, reminding us of the shoes worn by ladies to-day.

Alfred loved books all his life. When he had driven the Danes out of England, the king took his Latin books and wrote them out in English for his people to read. Alfred wrote out many books with his own hand. All the wise laws he made were also carefully written out by the king himself. He wrote out parts of the Bible in English for his people to study. Even now at this day we can read and admire what Alfred wrote a thousand years ago. King Alfred was one of the finest kings England ever had. He loved his people, he saved them from the Danes, he taught them to love what is good, he wrote for them splendid books, he was a hero and a saint. In the city of Winchester stands a fine statue of Alfred the Great, raised high above the traffic, it reminds us of the noble life and example of one of our most splendid English kings.

Alfred's jewel.—About eight hundred years after Alfred the Great had died, a jewel was found at Athelney. It is believed that this golden ornament had belonged to King Alfred, for on it is written, "Alfred had me made." The jewel is made of blue enamel and crystal and gold. In the middle is a portrait of a man holding two flowers, which is said to be a picture of King Alfred. The ornament is egg-shaped, and the words are placed round the portrait. This fine jewel shows us that clever goldsmiths lived in the time of Alfred the Great, it is carefully kept in a museum at Oxford, where it may be seen. In the days of King Alfred the Saxon nobles each wore such a jewel round his neck or to fasten his cloak.



RHYMES AND POEMS



THE WATCH-MAKER'S SHOP

(This poem is set to music on page 910.)

A street in our town
Has a queer little shop,
With tumble-down walls
And a thatch on the top,
And all the wee windows
With crook-ed-y panes
Are shuning and winking
With watches and chams

The watch-maker sits
On a long-legged seat,
And bids you the time
Of the day when you meet;
And round and about him
There's tick-et-y tock
From the timest watch
To the grand-father clock.

I wonder he doesn't
Get tired of the chime,
And all the clocks ticking
And teling the time,

But there he goes winding
Lest any should stop,
This queer little man
In the watch-maker's shop

From "Punch."

Note—This is a charming poem easily understood by the Sixes and Sevens. There are many watch-makers' shops like the one described in the poem. Read or say the first stanza to the children and let them draw their impression of the shop. Let the children explain why it is called a *queer* little shop. What is a *thatch*? What are *crook-ed-y panes*? Tell of other words that end in *ing* like *shuning* and *winking*.

The second stanza, too, is very interesting. The watchmaker sits on a *long-legged seat*, so that he can bend over his table or bench to see the works of the clocks and watches. Often he wears a white overall and frequently uses spectacles. Some children will have seen a watch-maker look through a lens at a watch, and they can show how this is done. Let them draw their own impressions of a *grandfather clock*.

THE GYMNAS TIC CLOCK

The little clock is friends with me,
It talks as plain as plain can be,
And says, each morning as it rises,
"Now, don't forget your exercises!
Both hands above your head, you know!
Then lower them very slowly, so,
Ho, don't get tired and stop, that way!
I exercise like this, all day!"

Right in its face then, I say, "Pooh!
I wouldn't boast of it, like you,
But I can swing my arms 'round, too!"
And so the clock then looks at me,
And I look back, and I and he
Each single morning, when we rise,
Just exercise and exercise!

M. C. Davies.

A NEW DAY

Little one, my little one,
Look and laugh, the day is new!
Joyfully the round-faced sun
Smiles at me and you

See, he shines above the brim
Of the clouds that gave us rain,
Kiss your little hand to him,
Through the nursery pane

Lily Dougall

THE CLOUD HOUSE

A little old man lived up in a cloud,
And he was as poor as he was proud,

When the sun came out, and the day was
bright,
His dear little house was all shining white.

When evening came, and the sun went to
bed,
His dear little house turned a lovely red

When the stars came out, and they winked
at him,
His dear little house was all grey and dim.

When the moon came out, shining soft and
clear,
His dear little house looked ever so dear!

But the sun was so hot one very fine day
That the cloud and the little man melted
away!
And where they melted to—no one can say!

Adrian Mott

SUMMER EVENING

The sandy cat by the Farmer's chair
Mews at his knee for dainty fare,
Old Rover in his moss-greened house
Mumbles a bone, and barks at a mouse,
In the dewy fields the cattle lie
Chewing the cud 'neath a fading sky,
Dobbin at manger pulls his hay
Gone is another summer's day

Walter de la Mare

THE FLOWERS

The gardener works away for hours
To make the borders gay with flowers
He plants the bulbs and sows the seeds,
He digs and hoes and rakes and weeds,
And every day has work to do
In winter and in summer too

But in the Windy Wood I found
The bluebells thick upon the ground,
And in the sloping fields below
Thousands of yellow cowslips grow;
And yet to tend them there is none
Except the wind and rain and sun

Rose Fyleman.

THE WHITE WINDOW

The Moon comes every night to peep
Through the window where I lie.
But I pretend to be asleep,
And watch the Moon go slowly by,
—And she never makes a sound!

She stands and stares! And then she goes
To the house that's next to me,
Stealing by on tippy-toes,
To peep at folk asleep, maybe
—And she never makes a sound!

James Stephens.

MOTHER MOON

The moonlight is shining
So white through my window
The moon has been walking
All night through the sky
The way that my mother
Comes walking on tiptoe,
When I'm thinking how slowly
The dark's going by.

The Sun is the father,
The Moon is the mother,
And the stars are the children
Awake in the night
She stoops down to kiss them
And tucks in the covers,
And when she is going
She leaves them her light.

Amelia Josephine Burr.

Flash Cards—reading and doing—Print the following directions on strips of card; exhibit each card in turn for a few seconds to the class, and let the children take turns in carrying out the directions. Teacher draws a line across the blackboard and tells the children that they are going to make a sea picture. The top half of the board is to be the sky and the lower half is to be the sea —1 Put a sun in the sky 2 Put two clouds in the sky 3 Put a ship in the sea 4 Make waves for the sea 5. Put a steamer on the sky line. 6. Put a fish in the sea 7 Put some gulls in the sky

THE MOON

O, look at the moon!
She is shining up there,
O mother, she looks
Like a lamp in the air.

Last week she was smaller,
And shaped like a bow,
But now she's grown bigger,
And round as an O

Pretty moon, pretty moon,
How you shine on the door,
And make it all bright
On my nursery floor!

You shine on my playthings,
And show me their place,
And I love to look up
At your pretty face

And there is a star
Close by you, and maybe
That small twinkling star
Is your little baby.

E. L. Follen

Rhyming words—Read aloud the following incomplete rhymes and let the children suggest the final words —

1. J for Jack and Jill and Jenny
P for Pot and Pan and — (*Penny*)

2. Dribble, dribble, trickle, trickle,
What a lot of rawdust!
My dolly's had an accident,
And has lost a lot of — (*sawdust*)

3. Dance, little baby, dance up high,
Never mind, baby, mother is — (*by*).

4. Robin friend has gone to bed,
Little wing to hide his — (*head*)



PANSY

WILD ROSE

FLOWERS
SUNFLOWER
ANTIRRHINUM
902

SWEET PEA

POPPY

SONGS

LADY MOON

LORD HOUGHTON

PERCY G SAUNDERS

Slowly

Doh = D

La-dy Moon,

La-dy Moon, Where are you roving? Over the

sea La-dy Moon, La-dy Moon, whom are you loving?

All that love me

MY LITTLE SISTER

OLD RHYME

PERCY G. SAUNDERS

Doh= D || : | : | : | : d }

have a lit - tle sis - ter; They call her Peep,

Peep She wades in the wa - ter,

|| d :l, | d :- | : | : .m }

Deep, deep, deep She

|| l t :l .t | d' :l | d' :l | d' : }

climbs the moun - tains, High, high, high

|| d' :t .l | s .m :- .m | d .d :l, | d :- ||

Poor lit - tle sis - ter' She has but one eye.

OLD RHYME

HICKORY, DICKORY, DOCK

Arranged by
PERCY G. SAUNDERS

Doh = C

The musical score is written in 3/8 time. The vocal line uses a simplified notation system where letters (s, l, t, d, m) represent notes, and dashes indicate rests. The piano accompaniment consists of chords in the right hand and a single-note bass line in the left hand. The lyrics are: "Hick - o - ry, dick - o - ry, dock! The mouse ran up the clock. The clock struck one! The mouse ran down. Hick - o - ry, dick - o - ry, dock!"

Lyrics: Hick - o - ry, dick - o - ry, dock! The mouse ran up the clock. The clock struck one! The mouse ran down. Hick - o - ry, dick - o - ry, dock!

TICK-TOCK

PERCY G SAUNDERS

Doh = C

The first system of the musical score is in 2/4 time. The vocal line begins with a double bar line, followed by two measures of rests, then a quarter note 'm' (Doh) and a dotted quarter note 'd' (C), and finally another quarter note 'm' and dotted quarter note 'd'. The lyrics 'Tick, tock, tick, tock,' are written below the vocal line. The piano accompaniment consists of a treble and bass staff. The treble staff has a melody of quarter notes: C4, D4, E4, F4, G4, A4, B4, C5. The bass staff has a bass line of quarter notes: C3, D3, E3, F3, G3, A3, B3, C4.

The second system of the musical score continues the vocal line with the lyrics 'Lis - ten to the big clock, Lis - ten to the tick - ing of the'. The vocal line consists of eighth and quarter notes. The piano accompaniment continues with the same melody and bass line as the first system.

The third system of the musical score concludes the vocal line with the lyrics 'big, big clock.' followed by a double bar line. Above the vocal line, the letters 'D C' are written. The piano accompaniment continues with the same melody and bass line as the previous systems.

There was an old woman toss'd up in a blanket

OLD RHYME

PERCY G SAUNDERS

Doh=C { : : . | : : | : : | : .d | d :-r .m | f :s :l }

There was an old wo-man toss'd

{ :s :d' :m | m :-r | m .-f :s | l :-s | m :d :d | d :-d }

up in a blan - ket Nine - ty-nine times as high as the moon. But

{ |d :-r :m | f :s :l | s :d' :m | m :-r :r }

where she was go - ing no one could tell, For

un - der her arm she car - ried a broom. "Old

wo - man, old wo - man, old wo - man," said I, "Ah

whi-ther, ah whi-ther, ah, whi-ther so high?" "Im sweep-ing the cob - webs

off the sky, And I'll be with you by and by."

THE WATCHMAKER'S SHOP

From "PUNCH"

PERCY G. SAUNDERS

Doh = C { | : : | : : | : : | : :s | }

1. A
2. The
3. I

{ |s :l :t |d' :t :l | s :f :s |m :- :s | }

street in our town Has a queer lit - tle shop With
watch - mak - er sits On a long - leg - ged seat, And
won - der he does - n't Get tired of the chime, And

{ |s :l :t |d' :t :l | s :f :s |m :- :s | }

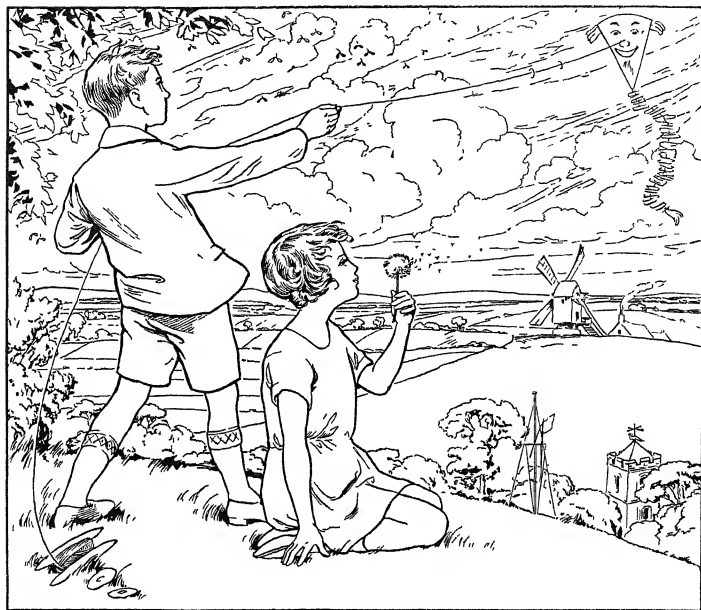
tum - ble - down walls And a thatch on the top; And
bids you the time Of the day when you meet; And
all the clocks tick - ing And tell - ing the time; But

all the wee win - dows With crook - ed - y panes Are
 round and a - bout him There's tick - ett - y tock From the
 there he goes wind - ing Lest an - y should stop, This

shin - ing and wink - ing With watch - es and chains.
 ti - ni - est watch To the grand - fath - er clock.
 queer lit - tle man In the watch - mak - er's shop.

CENTRE OF INTEREST—THE WEATHER

XXV. THE WIND



A WINDY DAY

Drawing in Outline of Picture No 30 in the Portfolio

Description of Picture No. 30.—A boy and a girl are shown on a windy hill top overlooking a stretch of countryside. The boy is flying his kite—a yellow one with a face painted on it, having two red ears and a long tail attached. His spool of string and two coloured discs lie on the ground behind him. These discs are threaded on the string, and will travel some distance up it; children sometimes call them “messengers.” Two “messengers” are seen on the string attached to the kite. The girl is blowing a dandelion “clock”, counting one for each puff till all the seeds are blown away. Overhead, sycamore fruits, torn off the parent tree by the gusty wind, are whirling through the air. The tempestuous sky shows the force of the wind, while the landscape offers other features to denote

it—the windmill, the weathercock on the church tower, the red flag on the flagstaff and the smoke from the cottage chimney.

The frieze below the picture shows clusters of coloured balloons. Trace-outs of these are given on pages 914 and 915. Half the number of children will require whole sheets of drawing paper with tracings of the upright cluster, while the others will need whole sheets with tracings of the second cluster. Let the children first water wash their papers, then colour the balloons as they please. After colouring, they may cut out their segments along the dotted lines and paste them edge to edge on a strip of wall paper, or they may cut round the edge of the balloons, stick them to the background and then draw the threads in pencil or in water colour.

LANGUAGE AND SPEECH TRAINING

Conversation on Picture No. 30.—The children should freely describe and discuss the picture. To stimulate thought and observation and to bring to the notice of the children any points overlooked, the teacher may make some of the following suggestions:—1. Give a name to the boy in the picture, e.g., *Jerry*. Tell what Jerry is doing. 2. Tell what the kite is like. 3. Tell what a kite is made of. 4. Give a name to the girl, e.g., *Jean*. Tell what Jean is doing. 5. Show how you pretend to find the time from a dandelion “clock”. 6. Tell how clouds look when the wind blows. 7. Find the windmill. Tell what happens to the windmill when the wind blows. 8. Find the weathercock. Tell how a weathercock shows how the wind blows. 9. Find some smoke. Tell how it shows where the wind blows. 10. Find the flag and flagstaff. Tell how the flag shows when the wind blows. 11. Tell what you see in the border under the picture.

Talks to the children.—Repeat this poem to the children or write it on the blackboard for them to read. The poem is set to music on page 938.

Who has seen the wind?

Neither I nor you,

But when the leaves hang trembling,

The wind is passing through

Who has seen the wind?

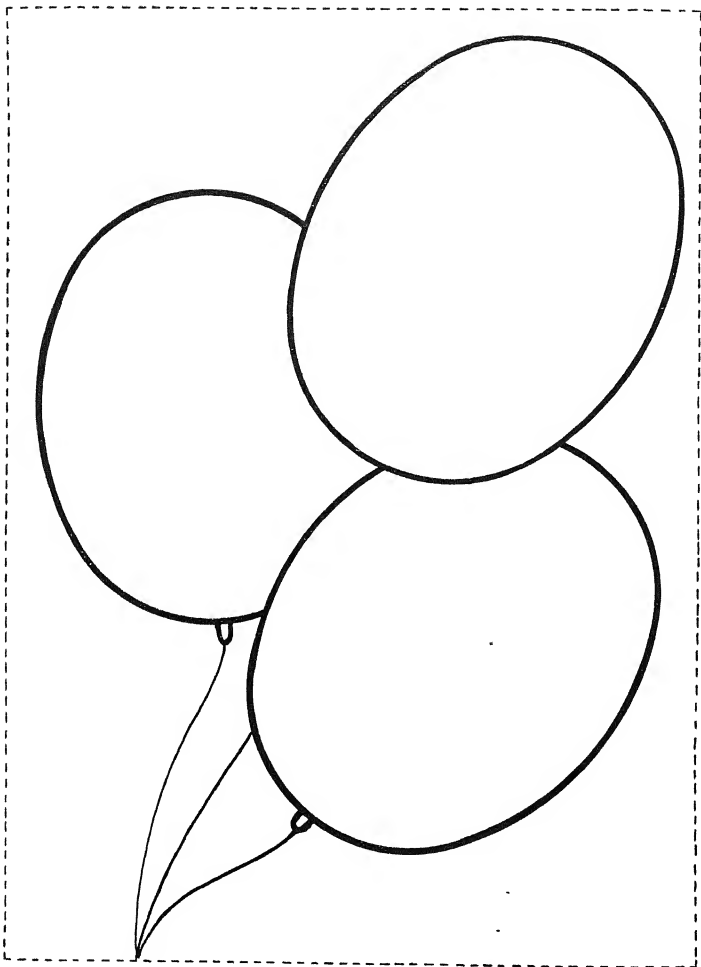
Neither you nor I,

But when the trees bow down their heads,

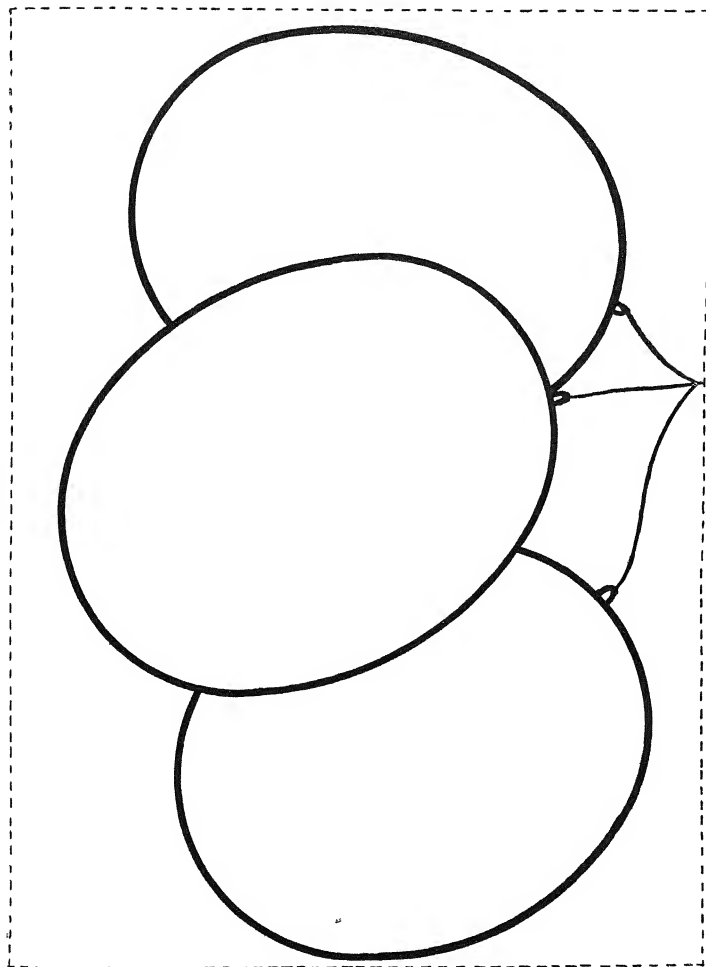
The wind is passing by.

Christina Rossetti

This poem says that we cannot see the wind. That is true, but we know when the wind is about. How? Collect evidences of the wind from the children, e.g., swaying trees, rustling leaves, clothes blowing on the line, clouds racing across the sky, sounds of whistling and moaning in chimneys, round corners and under doors, banging



TRACE-OUT FOR FRIEZE—BALLOONS
Trace this Drawing for part of the Frieze, Picture No. 30



TRACE-OUT FOR FRIEZES—BALLOONS
Trace this Drawing for part of the Frieze, Picture No. 30

doors, dust and papers blown about the streets, stormy seas, ruffled lakes that are usually still. By these and other signs we know that the wind is about.

Where does the wind come from? Does it always blow from the same direction? Perhaps one morning as you came to school the wind was blowing in your face. It blew your coat against you, your scarf stretched out behind and you found it hard work to get along, you had to push yourself against the wind. A picture or quick sketch on the blackboard might help here. The wind was blowing from one direction. Then, perhaps, on another day when walking again to school along the same road, the wind blew against your back. It pushed you along, it blew your cap off your head and your scarf out in front of you. The wind was blowing in the opposite direction. Winds blow from many directions, and we give them names according to the direction from which they come. Do you know any names for the winds? Get the children to name north, south, east and west wind. (See the game "North, South, East and West" on page 918.) We talk about the north, south, east and west winds, what do we mean? Winds that blow *from* the north, south, east or west. Do you know anything about the north wind? It is generally cold. South? Warmer and softer. East? Cold and dry. West? A wet wind bringing rain. It is often a strong wind that breaks branches from trees or even uproots them, knocks off chimney pots, blows dustbin lids about and turns umbrellas inside out.

The south wind brings warm weather,
The north wind wet and cold together,
The west wind always brings us rain,
The east wind blows it back again.

There are other winds besides north, south, east and west winds. From what other directions could they come? Try to get the children to discover north-west, north-east, south-west, south-east. From what the

children already know let them decide what types of winds they will be. There is always a wind blowing, but sometimes it is so gentle that we do not call it a wind, but a *breeze*.

How can we tell the direction of the wind? We are helped by weathercocks and weather vanes, which we see on church steeples, and towers. (See blackboard illustrations on page 917.) Make sure that children realise that the head of the weathercock points to the direction from which the wind comes. If the school has a weather vane let the children go out to see it, and watch it swinging in the wind.

How is wind useful? You have all seen clothes hanging on the line on washing day. You know they are hanging out to dry. Some days they hang limp and straight down, not moving. On other days they are tossed about and flapping on the line. Will they dry more quickly hanging still or blowing about? The wind then is useful for drying purposes. It dries, not only clothes, but the land when it is wet after rain. Our gardens and fields would remain very wet if there was no wind to dry them. In what other ways is the wind useful? Sailing ships depend on the wind to move them along, windmills depend on the wind to move their sails. Most boys have sailed toy boats on lakes or ponds. There are some windmills in *Picture No. 3* in the portfolio. Grain is ground in a windmill. Unless the wind moves the sails of the mill, the grain cannot be ground into flour.

The wind helps to bring rain which, with the sun, makes plants grow. The wind sometimes does harm. Children will be able to say what harm it does to trees, fences, telegraph wires, etc.

Flash Cards.—The following sentences might be written on strips of card:—

1. Jean has a dandelion flower head.
Jean calls it a "clock."
The flower head is white.
Jean blows the white seeds away.
She counts as she blows.



SMOKE FROM CHIMNEY

SIGNS OF WIND
WEATHERCOCK
SEEDS FROM SYCAMORE

KITE

FLAG FROM MAST

- 2 Jerry has a fine kite
The kite is yellow.
The kite has eyes and a mouth.
It has red ears.
It has a long tail.
3. Jerry wears a brown suit
Jean has a pink dress.
The grass is green.
The fields are green and yellow.
The sky is blue
4. Can you see the windmill?
Can you see the church?
How many balloons can you count?
Where is the flagstaff?

Missing words.—Say such sentences as the following for the children to supply the missing colour-words.—

1. Jean wears a — (*pink*) dress.
2. Jerry wears a — (*brown*) suit
3. The kite is — (*yellow*) with — (*red*) ears.
4. On the flagstaff is a — (*red*) flag.

What the wind does.—Encourage the children to tell what the wind does, e.g.,—

1. Moves the clouds 2. Dries the roads
3. Brings the rain 4. Brings the snow.
5. Sails the ships. 6. Sails the kites
7. Turns the weathercock 8. Blows the

flags 9. Dries the washing. 10. Scatters the leaves. 11. Scatters the fruits. 12. Makes the sea rough.

Individual reading cards.—This description of *Picture No 30* can be hectographed for children's individual reading cards—

Jerry and Jean spent a holiday in the country. They went out one windy day. Jerry took his kite. They walked up a green hill till they came to the top.

The Class Picture shows you Jerry and Jean on top of the hill. Jerry flies his kite. It is a yellow kite with a long tail. The kite has a face painted on it. Up goes the kite into the air. Jerry lets out the string little by little.

Jean kneels on the grass. She blows a dandelion clock

"I will see what time it is," says Jean. Then she puffs away the seeds—puff!—"One o'clock"—puff!—"Two o'clock!"—puff!—"Three o'clock." The seeds have all gone. "It is three o'clock," says Jean.

It is lovely to be on the top of a hill. Look at the green fields all around. Look at the blue hills far away.

The wind blows hard. It blows the little green seeds off the tree into the air. It makes the red flag flap. It turns the weathercock on the church tower below the hill. It turns the arms of the windmill. It blows the smoke from the cottage chimney.

ACTIVITIES AND CONSTRUCTIVE WORK

Game—"North, South, East and West."—

This is a useful game for teaching the points of the compass. The children are divided into four teams, each under a leader. The four leaders represent North, South, East and West, and take the colours green, blue, red and gold respectively. The following slogans will help the children to remember the colours, as well as certain facts in connection with the points of the compass—

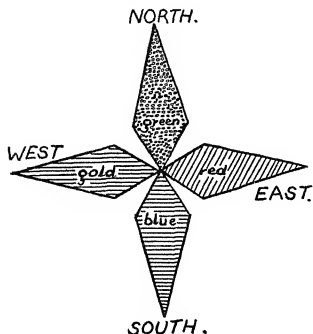
Green for the north, because *evergreen* trees grow there

Blue for the south, because the southern skies are *blue*.

Red for the east, because the *red* sun rises there

Gold for the west, because the *golden* sun sinks there.

The children may make a simple compass pointer with paper of the team colours, as shown in the sketch



The positions of the leaders are found from a true compass and marked on the ground with chalk, they should be as widely separated as possible. The leaders stand at these points, facing inwards, wearing a paper badge of the correct colour. The teams stand in single lines facing their leaders, thus making the "arms" of the human "compass". The pointer may be laid on the ground in the middle of the "compass" so formed.

The leaders in turn give orders to their teams, such as these.—

"Hop five hops to the west"

"Run three steps north."

"Nod twice to the east"

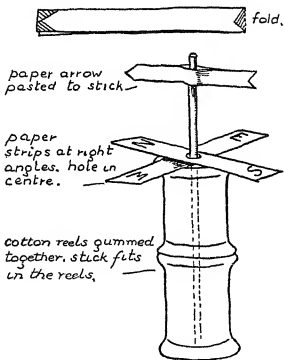
Any child making a mistake in obeying the order drops out, and the team which has some children left in last wins the game.

With younger children the team leaders may take part with the teams, and the teacher may give all the orders.

Model with odds and ends—weather vane.—

Take two empty cotton reels, strip off the

paper on the ends and gum them together. While drying, put a stick or skewer through the reels to make sure the holes coincide, and for a weight slip two more cotton reels on the stick. Cut two strips of stiff paper about 3 in. long, make a hole in the middle of each and paste the strips together at right angles with the holes coinciding,—the right angle can be measured against the corner of a box or desk. Write NS, E and W on the ends of the strips. Fold a strip of paper and from it cut two smaller arrows for the top of the vane. Take a kindergarten stick or fine skewer long enough to pass through the reels and project some distance from them, and thin enough to rotate easily in the holes. Paste the inner sides of the arrows and stick them together enclosing one end of the stick. Push the other end of the stick through the holes in the pasted NS and EW strips. Paste the top of the cotton reels, push the stick through them, and press down the NSEW strips to the topmost reel. The



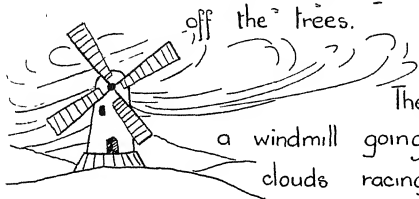
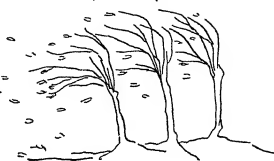
model is now complete and may be used in the study of the compass points, turning the arrow by means of the stick.

A Windy Day.



Father took Dick and Dot for a walk one windy day.

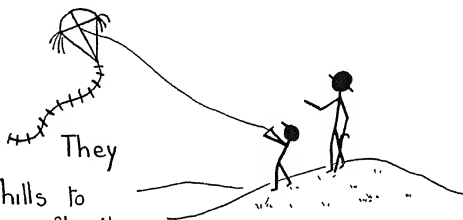
The wind was blowing all the leaves off the trees.



They saw the sails of a windmill going round, and the clouds racing across the sky

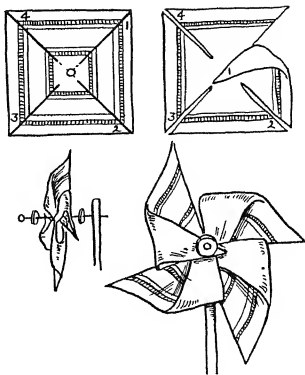
Jim made Dick a fine kite.

They took it on the hills to fly it.



Peter and Dot made paper windmills and ran down the road with them.

Model with odds and ends—paper windmill on stick.—The children of seven years old will be able to make this model. Take a square of coloured paper, not too stiff, and decorate it with coloured lines in crayon or paint. Draw the diagonals in pencil and cut down them to within a short distance of the centre. Take the corners marked 1, 2, 3, 4, in turn and paste them over the centre of the paper. Cut two tiny discs of cardboard and push a large-headed pin through the centre of one. Then push the pin through the exact centre of the paper, passing it through the four turned-down corners. Pass the pin through the centre of the second cardboard disc and finally push it into a kindergarten stick. The windmill can now be blown round, or it will revolve freely if the children run along with the sticks held firmly in their hands.



NATURE STUDY AND TALKS

WIND-BLOWN FRUITS

1. Winged fruits.—

THE fluttering sycamore fruits and the dandelion "clock" shown in

Picture No 30, bring to our notice

the part played by the wind in seed dispersal. These two plants are examples of the two chief types of fruits carried by the wind, the first by means of wings and the second by means of tufts of hair. There is a third type, of which the poppy is an example, in which the seeds are shaken out of the fruit by the wind, like pepper from a pepper pot.

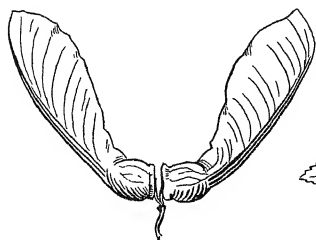
In autumn, it will be interesting for the children to collect and bring to school all the wind-blown fruits they can find, and to label and arrange them on a nature table in these three groups.

A list of the best-known trees and plants having wind-blown fruits is given here, under the group to which they belong.

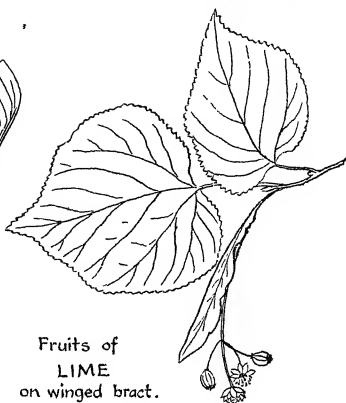
Sycamore	Ash	Lime
Elm	Birch	

These are all tall trees so that the fruits have to fall a considerable distance and the wind has thus a chance to scatter them far and wide.

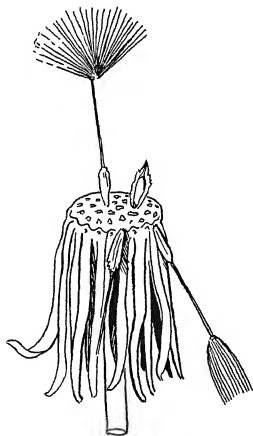
Practical work.—Get a supply of these different fruits and take the children out into the playground on a windy day. Take each of the different fruits in turn. It will be helpful if the teacher can throw some fruits out over the children's heads from a second storey window. If this is not possible, stand on a chair and throw them as high as you can, and let the children in turn do the same. The children can watch how the wind catches and carries the fruits. Some may even soar over a roof and be blown out of sight.



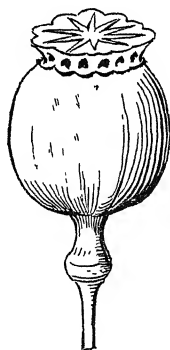
Winged fruit of
SYCAMORE.



Fruits of
LIME
on winged bract.



Head of DANDELION
with tufted fruits.



Pepper pot of
POPPY.

WIND-BLOWN FRUITS

In the case of the sycamore, try both pairs and single winged fruits. It will be noticed that the pairs fall to the ground, but the single fruits are buoyed up. They spin round, almost horizontally, but with the wing slightly raised above the seed. Let the children describe this movement. It can be seen indoors if there is an upper draught from a window, but not so successfully.

By questions, compare the flights of the three kinds of fruits, and write the results on the blackboard, as follows —

<i>Sycamore</i>	<i>Ash</i>	<i>Lime</i>
Spins round	Spins round	Spins round
nearly flat	slanting	with stalk
		straight up

2. Fruits with tufts of hair.—

Dandelion	Coltsfoot	Thistle	Sowthistle
Groundsel	Teasel	Scabious	

In the case of these plants the separate fruits are borne on a head, closely packed

together, each with a tuft of hair either joined directly to the fruit or borne at the end of a stalk

Practical work—Let the children gather the ripe heads of as many of these plants as possible and experiment with them by blowing at the heads. Let them examine and draw a single fruit with its tuft in each case

3. "Pepper pot" capsules.—

Poppy Antirrhinum Larkspur Wallflower

In this group the fruits are borne on a stiff stalk which bends in the wind and jerks out the seeds

Practical work—Obtain these fruits with as long stalks as possible. Place them upright with the stalk in a blob of plasticine on a sheet of white paper, then gently tap the stalk and watch the scattering of the seeds on the paper.

NUTS BLOWN DOWN BY THE WIND



ON windy autumn days the children will delight in bringing to school nuts which have been blown down from various kinds of trees. The nuts may

be labelled and arranged on a nature table provided for the purpose.

Later, during a handwork lesson, the children may utilise the nuts in various

ways. They may thread them together to make necklaces and dolls, or hollow them out for cradles and cups. They may be used as marbles or counters for games. A list of the best-known nuts which are most easily obtainable is given below.

Horse chestnut.—This is the most popular of all nuts among children, who call them "conkers." They often thread the nuts on a string and use them as weapons for battle, the one whose conker is first broken or pulled from his hand being the vanquished. The word "horse" is given to show their inferiority to the sweet chestnut, for horses will not touch them, though cattle, deer and sheep are fond of them. The horse chestnut consists of a single fruit, the large fleshy bur armed with short stout spines, being developed from the ovary. The bur splits into three valves when the dark-red glossy seeds are ripe. The children must be careful not to confuse them with the edible fruits of the sweet chestnut tree.

Sweet or Spanish chestnut.—The Sweet Chestnut tree belongs to an entirely different order from that of the Horse Chestnut, and the fruits are differently formed. The prickly bur of the sweet chestnut is developed from the cupule or involucre enclosing a cluster of two or three fruits. The bur splits into four when ripe. The children will be interested to know that in some parts of Italy poor people eat chestnuts instead of bread. In England many people

use chestnut stuffing in turkeys. As a special treat, nuts that the children have collected may be boiled in school for eating. They should not be eaten raw.

Beech.—In the case of the beech, like the Sweet Chestnut, the cupule encloses several fruits and grows to form a bristly closed box, which splits into four when the fruit is ripe, revealing two to four three-sided nuts.

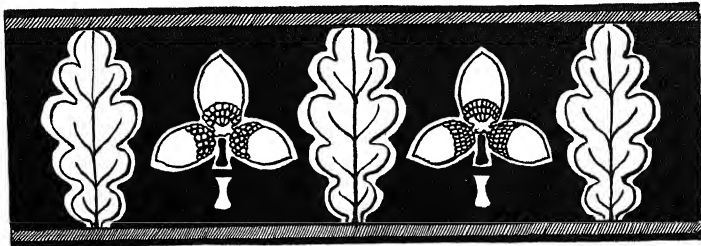
Acorn.—These well-known fruits need no description. The acorn cups are, like the burs of the Sweet Chestnut and Beech, formed from the cupule which in this case encloses a single fruit. Children delight to make dolls' utensils, fairy gardens, etc., from these fascinating cups. (See pages 76, 259 and 260.)

Walnut.—The fruit of the Walnut is at first green, soft and fleshy, and in this condition it is gathered for pickling. Later the green flesh becomes brown, and splits to disclose the "stone", which is the well-known walnut, with its wrinkled kernel of crisp white flesh. Only in the southern half of Britain the nuts can be relied upon to ripen.

RIDDLE

As soft as silk, as white as milk,
As bitter as gall, a thick wall,
And a green coat covers me all.

(Answer: A Walnut)



STORIES TO READ OR TELL

MISS GOOSEBERRY GOLD

IN Mister Smith's garden ripe golden gooseberries hung in rows on the best gooseberry bush. They were so pretty that they shone under the green leaves like golden fairy lamps. The gooseberries were all big ones, but there was one which was twice as big as any of the others.

As they hung on the bush they talked to each other. "I wonder what will happen to such fine fellows as we are?" said one gooseberry. "And as for Miss Gooseberry Gold, who is the biggest of us all, she is fit to be a queen."

On a bush near by hung many red gooseberries. They were large and fine too, and there was one of them which was twice as big as any of the others. Said one rosy red gooseberry, "Something fine will happen to us one day, and as for Master Gooseberry Red, he is fit to be a king."

A gentle wind passing over the bushes laughed when he heard what the gooseberries were saying. Puff! he blew, and Miss Gooseberry Gold fell to the ground. Puff! he blew again, and Master Gooseberry Red fell beside her.

"Come," they said to each other, "let us go to a land of our own, where we can be king and queen." So off they ran as fast as they could.

Puff! Puff! Puff! blew the wind over and over again. Golden gooseberries and red fell to the ground on all sides, and went running after Miss Gooseberry Gold and Master Gooseberry Red. Over the green grass of the lawn they ran, and out into the road. Faster and faster down the lane, into the wood they went, till they came to a bank of soft moss. Here they found two mossy thrones, ready and waiting.

"Miss Gooseberry Gold," said Master Gooseberry Red, "let us take our seats.

This is the land for us. Here you are queen and I am king."

All the other gooseberries came and bowed low to their king and queen. Some were quite out of breath because they had run so fast. Then they sat in rows to hear the news. Bees flew round and hummed their low song. Butterflies kept off the heat of the sun with their pretty wings. They were all so glad to have a gooseberry king and a gooseberry queen. All went well until Lucy and Dick came into the wood for a picnic. They sat down and ate bread and butter and hard boiled eggs.

"How nice it would be," said Lucy, "if the blackberries were ripe. But it is too soon for blackberries."

"Look! look!" said Dick. "See all these fine gooseberries on the moss! How could they have got here?"

"Never mind that," said Lucy. "Let us eat them. This biggest red one shall be for you, and this biggest golden one for me."

Puff! Puff! blew the wind as Lucy and Dick ate the fine gooseberries.



Drawing.—In this story there are several word pictures which the children may like to draw in colour —

1. The gooseberry bush
2. Mister Smith

3. Miss Gooseberry Gold
4. Master Gooseberry Red
5. The gooseberries running down the road
6. The king and queen and their subjects.
7. Lucy and Dick.

THE STORY OF THE DANDELION



THE Red Indians who live in America tell a charming story about the dandelion. In the far south, where the summer never ends, lives Shawondasee, the South Wind. Shawondasee is a fat and lazy man; all day long he lies in the warm sunshine, listless and careless. The smoke from his pipe fills the air with a soft haze, smoothing the outline of the rugged hills.

Once as Shawondasee lay gazing northward, he saw far away on the prairie a maiden standing all alone. She was tall and slender, clad in robes of brightest green, and her hair was coloured yellow like the rays of the sun. As Shawondasee looked upon her, he loved her. Day by day he lay and gazed at her and sighed with love. But he was too fat and lazy to bestir himself and tell her so.

One morning when he looked northward he saw that the maiden's yellow hair had turned white. The lazy Shawondasee was heartbroken, for he thought that his brother,

the cold North Wind, had laid his icy hand upon her and turned her tresses white with snow. Shawondasee sighed so heavily with sorrow that the white locks of the maiden were all blown away, and the air seemed full of snowflakes. The maiden had vanished for ever.

Poor Shawondasee did not know that he had loved no maiden, but a prairie dandelion, whose white feathery head he had puffed away with sighing. Still he sits and sighs for his loved one with the green robe and the yellow hair.

Questions.—The following questions, with explanatory answers supplied by the teacher when necessary, will help the children to understand and appreciate the story—

1. Where do the Red Indians live? (See *Class Picture No. 10* in the portfolio.)
2. What do you know about Red Indians?
3. What does the beginning of the story tell you?
4. Who is Shawondasee?
5. Describe Shawondasee.
6. How does Shawondasee

spend his time? 7. What does the middle of the story tell you? 8 What is a prairie? 9 What did Shawondasee think he saw on the prairie? 10 Why did he sit and sigh? 11. Why did he not go to the maiden and woo her? 12 What change did he see in her? 13 What did he think had happened? 14. How did the maiden lose her hair? 15 What does the end of the story tell you? 16. Retell the story.

THE BUCKWHEAT

IF, after a storm, you go through a field in which buckwheat is growing, you will see that it has become quite black, as if it had been burned. I will tell you the why and the wherefore, as I heard it from the sparrow, who heard it from the lips of an old willow tree that dwelt near a field of corn and buckwheat, and is there still. The corn was glad to be alive, and grateful, too, for the fuller his ears were, the lower he bent as if in humble thankfulness. The proud buckwheat, however, held his head high and erect.

"I have as many golden ears as the corn," he said, "and am far prettier. My flowers are as lovely as apple blossom. Have you ever seen anything more lovely than I am, old willow tree?"

The willow tree only nodded as if to say, "That I have!"

"The stupid tree!" said the buckwheat. "He is so old that the grass is growing out of his body!"

Just then a great storm arose. All the flowers of the field folded their petals, and bent down their little heads. The Buckwheat alone stood erect and proud.

"Bend your head as we do," said the flowers. "I will not bow," said the buckwheat. "Close your flowers and fold in your leaves," said the old willow tree. "Do not look up at the lightning, for you will see right into heaven itself. Even men are blinded if they look, what then would happen to us, who are but weeds of the ground if we dared to do so!"

"Weeds of the ground!" said the buckwheat scornfully, "I will look up into heaven itself." The buckwheat in his pride looked upward, and for a moment the whole world seemed to be in flames.

When the storm had passed over, how sweet everything was after the rain. The flowers breathed again and the corn waved in the wind. But the buckwheat lay on the ground all withered and charred. The old willow tree shook his head in the wind, and big drops fell from his leaves. It was as if he wept. The sparrows chirped, "Why do you weep? Do you not breathe the fragrance of flowers and leaves, why do you weep, old willow tree?"

Then the willow tree told them what had happened to the proud buckwheat, and I who tell you now, heard it all from the sparrows one evening when I asked them for a story.

Playing the story.—In order to help children to appreciate the story let them mime actions and imitate sounds based on it —1. Look glad. 2. Bend your head in thankfulness. 3. Nod like the willow tree. 4. Stand erect and proud like the buckwheat. 5. Breathe deeply. 6. Wave your arms to imitate waving corn. 7. Lie down to pretend you are the dead buckwheat. 8. Shake your head sadly like the willow. 9. Pretend to weep. 10. Chirp like a sparrow.



A STORY FROM HISTORY

OAK-APPLE DAY

THE twenty-ninth of May is Oak-Apple Day! Why do some boys and girls in country places wear an oak leaf or an oak apple on the twenty-ninth of May? Long ago, nearly three hundred years ago, on the twenty-ninth of May, a prince named Charles climbed up a great oak tree and hid among the leaves. Charles' father had been king of England, but many people thought that he ruled the country badly, so they went to war against the king and his soldiers. The king—he was called Charles the First—wore long hair and his soldiers wore long hair too. They were called Cavaliers. The people who wanted to take the king from his throne cut their hair short. They were called Roundheads. Now there were many battles between the king's Cavaliers and the Roundheads. The leader of the Roundheads was Oliver Cromwell. He was a clever man and a great soldier. He trained his Roundheads to march, to ride and to shoot straight. They wore iron hats and iron coats, and so hard were Cromwell's soldiers to beat in battle that people called them Cromwell's Ironsides. Well, after nearly two years of fighting in England, Cromwell's Ironsides beat the king's Cavaliers. The king was taken prisoner and soon was put to death.

Then Cromwell thought that his soldiers had better make a prisoner of the king's eldest son, Prince Charles. Troops of Ironsides set out to capture him. Prince Charles had many Cavaliers as friends and they did their best to hide him and take care of him. The prince was a brave man who had fought in many battles. He escaped again and again from the Ironsides who were hunting for him.

One day, it was the twenty-ninth of May

in the year 1651, the Ironsides nearly caught Prince Charles. He and a few Cavaliers were hiding in a wood in Shropshire. The Ironsides came so near that the prince could hear them moving about. There was only one thing to do—try to hide in a tree. The prince climbed up a great oak and as he lay quietly hidden among the branches he peeped through the leaves and saw the Ironsides pass by. It was a very narrow escape.

Not long after this Prince Charles got away over the sea to France. Then Oliver Cromwell ruled the land, but he was not called King of England. Indeed, Cromwell did not want to take the title of king. Cromwell ruled England for eleven years and when he died, worn out by fighting and hard work, the people of England wanted Prince Charles to come back from France and be their king. Prince Charles was very glad to come back. Strangely enough he arrived in London on the twenty-ninth of May—his lucky day. There was great rejoicing when he landed. People remembered how he had hidden in the oak tree on the twenty-ninth of May several years before, and they decorated their houses with branches of oak and with flags. Huge bonfires were lighted, the people had great feasts, they danced and sang till long into the night. The new king was called Charles the Second.

Ever since that time, on the twenty-ninth of May, some people have worn oak leaves in remembrance of the day when Prince Charles escaped from the Ironsides in a Shropshire wood.

What is an oak apple?—Some boys and girls like to wear oak apples instead of leaves if they can find some. But apples do not grow on oak trees. Acorns grow on



TRACE-OUT OF ONE OF CROMWELL'S IRONSIDES FOR THE CHILDREN TO COLOUR

oak trees. What, then are oak apples? They are really lumps or swellings in some of the buds. The lumps are caused by tiny wasps. Early in spring a tiny wasp bores a hole in a bud and in the hole it lays an egg. When the egg is inside, the bud cannot grow properly, so it grows all round the egg and makes a ball which we

call a gall, and which boys and girls call an apple. The egg hatches into a tiny grub which lives and feeds inside the gall. Then the grub changes into a little wasp which bores a hole through the gall and flies away. If you can find an old gall on an oak tree you will be able to see the little hole by which the wasp crept out.

STORY AND RHYME

THE FOUR WINDS

Mr East gave a feast,
Mr North laid the cloth,
Mr West did his best,
Mr South burnt his mouth
With eating a cold potato.

THE four winds met in a wonderful cavern on the roof of the world. After they had told each other all the news, Mr. East said to the other three winds "Now you fellows, come and see me this day week. I invite you all to a feast here with me, on the roof of the world." This invitation pleased Mr. North, Mr. South and Mr. West, and they thanked Mr. East warmly, and promised to come without fail.

"It is not fair that you should provide everything," said Mr. North to Mr. East "At least let me bring you a tablecloth, fair and white, on which you may set out your dainties." So Mr. North laid the cloth. And what do you think his cloth was made of? It was made of a sheet of pure white glittering snow, with a sparkling fringe of icicles which made fairy music as they struck together, sounding like far-away bells.

"Let me do my share," said Mr. West, "I want to bring to my good friend, Mr. East, the best I can find in the west." So Mr. West flew about and gathered up apples and cider, roses and lilies

from the west of England, wines from France, and port wine and sherry from Spain, as well as nuts and grapes for dessert.

As for Mr. South, he found all kinds of wonderful fruits, peaches, bananas, oranges, pineapples, and many foreign fruits and lovely flowers with strange names; he brought figs and dates and Turkish delight, as well as different kinds of other delicious sweets.

Mr. East was very busy, you may be sure, finding all the most tempting meats and fish. From the rivers of Russia he brought the eggs of the sturgeon, looking like little greyish balls. Mr. East was very proud when he put these sturgeon's eggs on the tablecloth of snow. Fine roasted chicken, duck and turkey were set out with pretty green salad and decorations. Of course the roast beef of Old England was chief among the fine meats that Mr. East placed on his table. After roaming about everywhere, north, south, east and west, Mr. East had found all he needed for a fine feast. The four friends met together on the roof of the world and sat down to the splendid banquet.

Many little breezes waited on their masters, and carried round all kinds of food and wine, changed the plates, and placed fresh dishes on the glittering cloth of snow. At last the feast was over, and the busy little breezes had cleared the table. But one little something still lay

on the cold snow, and Mr South was very curious to know what it was. So he said to a little breeze "Bring me that roundish white thing lying over there."

The little breeze quickly brought him a cold potato, so cold with lying on the snow that it was frozen hard. Mr South put it in his mouth and tried to bite it, but the frozen potato seemed to burn his tongue, and he quickly took it out again, looking rather foolish as the other three began to laugh. However, Mr. South soon gave a hearty laugh himself, and then joined the

others in singing in honour of Mr East

"For he's a jolly good fellow,
For he's a jolly good fellow,
And so say all of us"

And now it was time for all the four winds to get on with their work once more, so they all said good-bye and thanked Mr. East over and over again for giving such a splendid feast to his friends.

J. Bone

STORY AND PLAY

STORY—

THE WIND AND THE SUN

Introduction.—The Sixes can dramatise this familiar fable. Read the story straight through, then discuss with the children how to act it. Consider the setting, write the names of the characters on the board and allot the parts. Read the story once again so that the chosen children can pay particular attention to their parts, and then let them act it. Re-read parts of the story if the children are at a loss to proceed. A simple dramatised version is given at the end of the story, with suggestions for a full production.

Story.—One day the sun was shining. He was making the flowers grow and everyone in the world brown and happy, when the north wind came along.

"Good morning, Mr. Sun," said the north wind. "How are you?"

"I am bright and happy, thank you," replied the sun. "How do you feel?"

"I feel very strong this morning," said the wind, "stronger than anyone else in the world."

"You are not stronger than I," remarked the sun.

"Oh! Yes, I am," answered the wind.

"Well," said the sun, "we will have a test to see which of us is the stronger."

Just as he spoke a man came along the road, wearing a heavy coat.

"Let us see which of us can make this man take his coat off," said the sun.

"Very well," replied the wind.

"You try first," said the sun.

The man came near, walking briskly along and singing as he went.

The north wind blew his hardest upon him,—such a cold wind it was, too.

The man shivered. "What a sudden wind!" he exclaimed, and he drew his coat round him.

The wind then puffed out his cheeks and blew and blew. But the man only shivered the more. He buttoned up his coat, turned up the collar and thrust his hands deep into his pockets.

"Now it is my turn," said the sun, and he shot out his warm beams upon the man.

"Here is the sun again," said the man. "What changeable weather we are having!"

The sun poured down upon him, and soon he was unbuttoning his coat. Still the sun shone and shone, and the man grew hotter and hotter.

"I must really take off my coat," said the man, at last. "It is too hot to wear it."

"Well," said the sun to the wind, "what do you think now?"

"You have won," said the wind, "you are certainly stronger than I am."

PLAY—

THE WIND AND THE SUN

This is a dramatised version of the preceding fable which may be performed in the classroom without properties or scenery, the only costume being the Traveller's coat. Suggestions for a full production are given at the end of the play.

People in the Play—WIND, SUN, TRAVELLER

Scene—A country road, with entrances right (R) and left (L)

[*Sun comes in*]

Sun (*spreading out his arms*). S-s-s-s-s!
S-s-s-s-s!

[*Wind comes in*]

Wind. Puff! puff! Puff! puff! Good morning, Mr. Sun. How are you?

Sun. I am bright and happy, thank you. How do you feel?

Wind. I feel very strong this morning, stronger than anyone else in the world.

Sun. You are not stronger than I am, you know.

Wind. Stronger than you! Oh! yes, I am.

Sun. We will have a test to see which of us is the stronger.

Wind. What shall we do?

Sun. Here comes a traveller along the road. He is wearing a heavy coat. Let us see which of us can make him take his coat off.

Wind. Very well. I agree.

Sun. Sh! Here he comes.

[*Traveller comes in L*]

Traveller (*singing*). Tra-la-la! La-la!
La-la!

Sun. Your turn first.

Wind. All right (*blowing at traveller*). Puff! puff! Puff! puff! Puff! puff!

Traveller (*rubbing his hands together*).

What a sudden wind!

Wind. Puff! puff! Puff! puff! Puff! puff!

Traveller (*flapping his arms across his breast*). How cold it is!

Wind. Puff! puff! Puff! puff!

Traveller (*buttoning his coat and turning up his collar*). I am glad to have on my warm coat.

Sun. You have lost, Mr. Wind. Now let me try (*Shines at Traveller*). S-s-s-s-s!

Traveller (*turning down his collar*). Here is the sun again.

Sun. S-s-s-s-s!

Traveller (*unbuttoning his coat*). It is very warm for March.

Sun. S-s-s-s-s! S-s-s-s-s!

Traveller (*taking off his coat*). I must really carry my coat. It is too hot to wear it (*Goes out R*).

Sun. Well, Mr. Wind. What do you think now?

Wind. You have won, Mr. Sun. I see that you are much stronger than I.

Adapted by Kate Lay

SUGGESTIONS FOR A FULL PRODUCTION OF "THE WIND AND THE SUN"

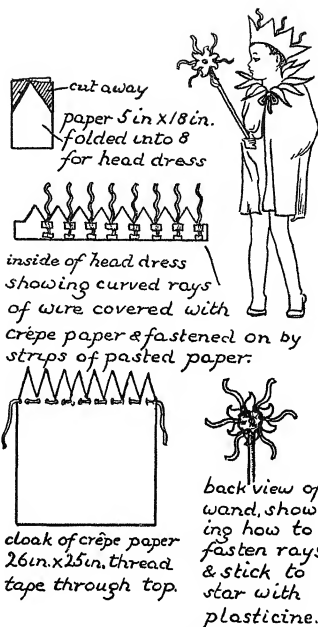
Scenery.—A green curtain may be used as a background for this play, or a back-cloth with cut-out trees pasted or sewn upon it, like those described for the play *A Little Pine Tree*, on page 299. Only a narrow stage is required, with an entrance at each side.

Costumes.—The costume for *Sun* consists of a cape, headdress and wand. To make the headdress, fold a stiff piece of yellow paper 5 in. by 18 in. into eight sections. Cut the top edge of the folded paper to a point. Make eight rays for the headdress from pieces of curved wire bound with yellow crêpe paper. Attach the rays to the

inside of the headdress, between the points, with pieces of paper pasted over, as shown in the diagram. Try the headdress round the head and paste or pin the ends together at the back. The cloak is a sheet of yellow crepe paper 26 in. by 25 in. Fold the sheet into eight sections to cut the zig-zag collar, in the same way as for the headdress. Make holes at the base of the points, thread a tape or ribbon through them and tie on the cape round the neck. Flecks of gold paint added to the cloak and headdress give a good effect. The wand consists of a cardboard sun painted gold and fixed to a stick. Sun rays (made in the same way as those on the headdress) are fixed to the back of the sun with plasticine. The stick is bound with yellow paper and joined to the sun by plasticine at the back and a drawing pin in front.

The *Wind* wears trousers of grey crepe paper cut in jagged pieces from the knee downwards. At the back of each arm from shoulder to hand is sewn a length of crepe paper 15 in. by 17 in., and round his neck is a collar of paper cut with jagged edges. The boy's hair should be tossed about in an unruly manner. This costume is shown in the half plate on page 302.

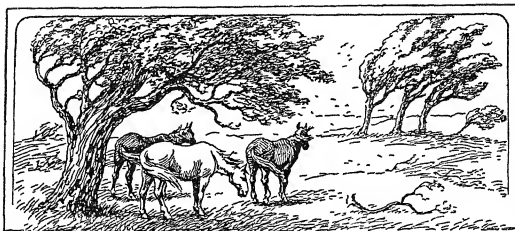
The *Traveller* wears a long overcoat and felt hat.



COSTUME FOR SUN



RHYMES AND POEMS



LITTLE WIND

(This rhyme is set to music on page 768)

Little wind, blow on the hulltop,
 Little wind, blow down the plam;
 Little wind, blow up the sunshine,
 Little wind, blow off the ram.

Old Rhyme.

BREEZE GENTLY BLOWING

(This rhyme is set to music on page 937)

Breeze gently blowing,
 Rustling all the leaves,
 Whither are you going,
 Away through the leaves?

Old Rhyme

A WISH

I often sit and wish that I
 Could be a kite up in the sky,
 And ride upon the breeze, and go
 Whatever way it chanced to blow;
 Then I could look beyond the town,
 And see the river winding down,

And follow all the ships that sail
 Like me, before the merry gale,
 Until at last with them I came
 To some place with a foreign name.

Frank Dempster Sherman.

Note—Children are now so familiar with aeroplanes, that they will be able to supply a long list of names of things that might be seen if one were a kite high up in the air. Let them note in their *Word Books* the names *wind, breeze, gale*. The children will be able to name some foreign lands to which they might go in ships, and they will be eager to talk about some of the wonders they might see.

The verses are arranged in couplets. Let the children name other words to rhyme with *I* and *sky*, *go* and *blow*, *town* and *down*, *sail* and *gale*, *came* and *name*.

THE FOUR WINDS

In winter, when the wind I hear
 I know the clouds will disappear,
 For 'tis the wind that sweeps the sky
 And piles the snow in ridges high.

In spring, when stirs the wind, I
 know
 That soon the crocus buds will show,
 For 'tis the wind that bids them wake
 And into pretty blossoms break.

In summer, when it softly blows,
 Soon red, I know, will be the rose;
 For 'tis the wind to her who speaks,
 And brings the blushes to her cheeks.

In autumn, when the wind is up,
 I know the acorn's out its cup,
 For 'tis the wind who takes it out,
 And plants an oak somewhere about.

Frank Dempster Sherman

Note—This poem is useful for recitation when discussing the character of the various winds. The first verse speaks of the cold north wind that sweeps away the clouds and brings the snow

The second verse speaks of a milder wind, perhaps the south wind, that dries the earth after the winter's snow and rain, and warms the soil a little for the bulbs to put forth their buds and blossoms

In the third verse we read of the soft south wind that accompanies the summer sunshine, which makes the flowers grow and tans the face.

Autumn is the season of strong winds and gales which shake the branches of the oaks and bring down showers of acorns

It will be noted that in this poem the writer has made liberal use of soft sounding sibilants, e g.,—

In spring, when stirs the wind, I know
 That soon the crocus buds will show,

Note, too, the recurring sound of *b* in such words as buds, bids, blossoms, break, blows, brings, blushes. The children will like to think of other words which begin with *b*.

WIND ON THE HILL

No one can tell me,
 Nobody knows,
 Where the wind comes from,
 Where the wind goes.

It's flying from somewhere
 As fast as it can,
 I couldn't keep up with it
 Not if I ran.

But if I stopped holding
 The string of my kite,
 It would blow with the wind
 For a day and a night.

And then when I found it,
 Wherever it blew,
 I should know that the wind
 Had been going there too

So then I could tell them
 Where the wind goes .
 But where the wind comes from
 Nobody knows

A. A. Milne.

SOME ONE

Some one came knocking
 At my wee, small door,
 Some one came knocking,
 I'm sure—sure—sure,
 I listened, I opened,
 I looked to left and right,
 But nought there was a-sturring
 In the still dark night.
 Only the busy beetle
 Tap-tapping in the wall,
 Only from the forest
 The screech-owl's call,
 Only the cricket whistling
 While the dewdrops fall,
 So I know not who came knocking,
 At all, at all, at all.

Walter de la Mare

THE BALLOON MAN

He always comes on market days,
And holds balloons—a lovely bunch—
And in the market square he stays,
And never seems to think of lunch

They're red and purple, blue and green,
And when it is a sunny day
Tho' carts and people get between
You see them shining far away.

And some are big and some are small,
All tied together with a string,
And if there is a wind at all
They tug and tug like anything

Some day perhaps he'll let them go
And we shall see them sailing high,
And stand and watch them from below—
They *would* look pretty in the sky!

Rose Fyleman

THE WIND



The wind stood up, and gave a shout,
He whistled on his fingers, and

Kicked the withered leaves about,
And thumped the branches with his hand,

And said he'll kill, and kill, and kill,
And so he will! And so he will!

James Stephens.

SPRING MORNING



Where am I going? I don't quite know,
Down to the stream where the king-cups
grow—
Up on the hill where the pine-trees blow—
Anywhere, anywhere I don't know.

Where am I going? The clouds sail by,
Little ones, baby ones, over the sky
Where am I going? The shadows pass,
Little ones, baby ones, over the grass

If you were a cloud, and sailed up there,
You'd sail on water as blue as air,
And you'd see me here in the fields and say,
"Doesn't the sky look green to-day?"

Where am I going? The high rooks call:
"It's awful fun to be born at all"
Where am I going? The ring-doves coo'
"We do have beautiful things to do"

If you were a bird, and lived on high,
You'd lean on the wind when the wind
came by,
You'd say to the wind when it took you
away
"That's where I wanted to go to-day!"

Where am I going? I don't quite know.
What does it matter where people go?
Down to the wood where the blue-bells
grow—
Anywhere, anywhere. I don't know.

A. A. Milne.

SONGS

BREEZE GENTLY BLOWING

PERCY G. SAUNDERS

Slowly

Doh = F

Breeze gently blowing,

Rustling all the leaves, Whither are you

going, A way through the leaves?

THE WIND

CHRISTINA G. ROSSETTI

PERCY G SAUNDERS

Doh = F

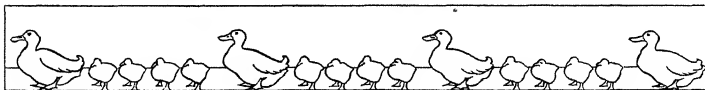
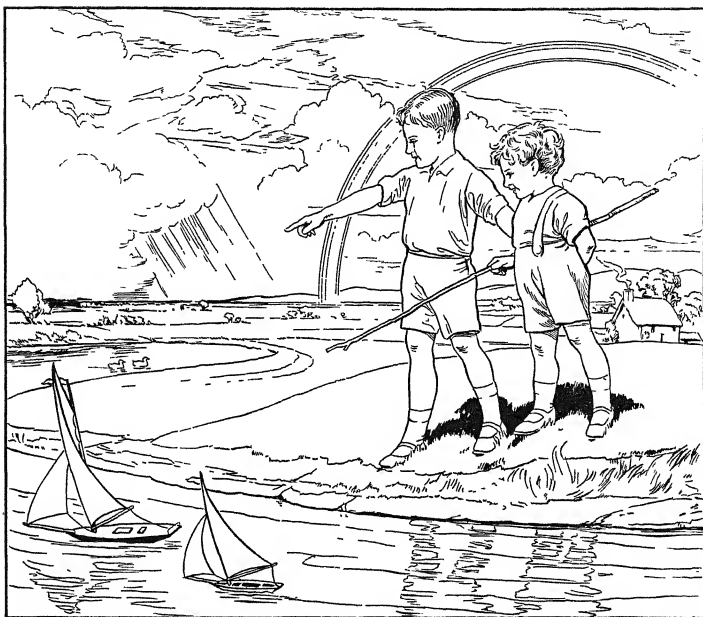
1 Who has seen the wind?
2 Who has seen the wind?

Neith - er I nor you, But when the leaves hang
Neith - er you nor I; But when the trees bow

trem - bling, The wind is pass - ing through
down their heads, The wind is pass - ing by.

CENTRE OF INTEREST—THE WEATHER

XXVI. THE RAIN



MINE IS WINNING !
Drawing in Outline of Picture No 31 in the Portfolio.

Description of Picture No. 31.—This picture shows a country scene after a rainstorm. The heavy clouds are parting, revealing the brighter sky behind them. The sun has broken through and makes a vivid rainbow against the clouds. Two children occupy the foreground of the picture. They are standing in a field on the bank of a winding stream. They have put their toy yachts to sail on it and the swollen current rapidly bears them along. The larger boat, belonging to the elder boy, is leading, and he triumphantly points this out to his brother. The smaller boy carries a long stick with which to help along their craft. Two ducks can be seen swimming on the stream at its further bend.

The frieze below the picture is made up of a duck followed by four ducklings. Tracings for these are given on pages 942 and 943. One-third the number of children will require whole sheets of drawing paper with tracings of the duck, while the others will need half sheets with tracings of two of the ducklings. The children should first water wash their papers, then colour the birds as shown in the picture, giving the white duck a grey wash. After colouring, they may cut out their segments along the dotted lines and mount them edge to edge on the back of a strip of wall paper to make a similar frieze for the classroom wall.

LANGUAGE AND SPEECH TRAINING

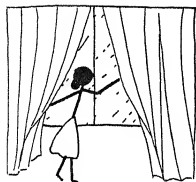
Conversation on Picture No. 31.—The children should freely describe and discuss the picture. To stimulate thought and observation and to bring to the notice of the children any points overlooked, the teacher may make some of the following suggestions.—1. What in the picture tells you that it has been raining there? 2. Give a name to the older boy; e.g., *David*. 3. Give a name to the younger boy, e.g., *Peter*. 4. What are David and Peter watching? 5. To which boy do you think the bigger boat belongs? 6. To which boy do you think the smaller boat belongs? 7. Which boy says, "Mine is winning"? 8. Why has Peter a long stick? 9. Find some ducks on the stream. Tell how many ducks are on the stream. 10. What are baby ducks called? 11. Tell how many ducklings are in the border under the picture. 12. Tell how many ducks there are in the border under the picture.

Flash Cards.—The following sentences might be written on strips of card—

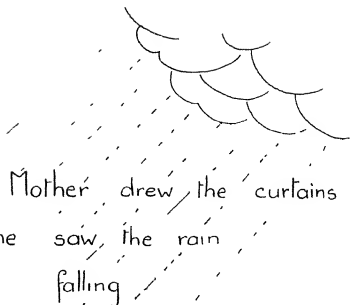
1. It has been raining.
There are big clouds in the sky.
The sun shines through the clouds.
The sun makes a lovely rainbow.
2. The rain has gone.
David and Peter go to sail their ships.
David and Peter are brothers.
David is older than Peter.
3. David's ship is winning.
David's ship is bigger than Peter's.
David is pointing to his ship.
Peter has a long stick.
4. Ducks like the rain.
Ducks swim in water.
Baby ducks are called ducklings.
There are four ducks in the picture.
There are twelve ducklings in the picture.

Number.—Write the following sentences on the blackboard or on cards with the number-words omitted, and let the children

A Rainy Day



When Mother drew the curtains
she saw the rain
falling

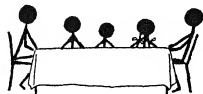


Dick put on his Wellingtons to go
to school



Mother helped Dot to put on
her mackintosh

Jane took an umbrella
when she went out
shopping



Mother had some hot
soup ready when they
came home.

es.

supply the missing words with reference to *Picture No 31* —

1 In the picture there are — (*two*) boys, — (*one*) rainbow, — (*two*) sailing boats and — (*two*) ducks.

2. In the border under the picture there are — (*four*) ducks and — (*twelve*) ducklings.

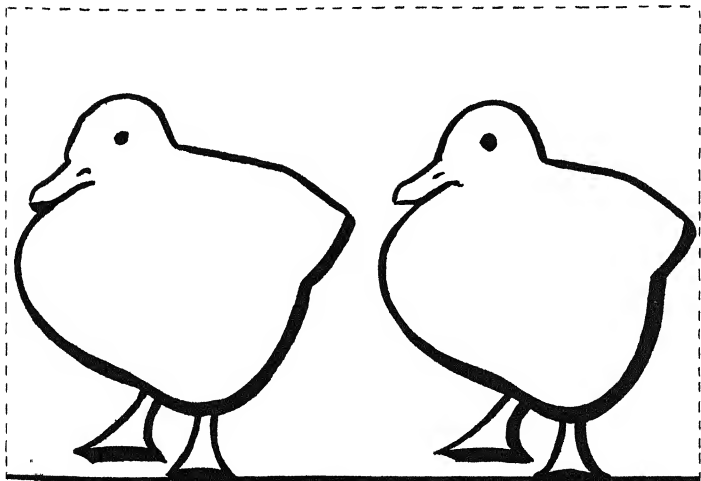
Reading and drawing.—Write on cards directions for drawing, and distribute the cards among the children —

1. Draw a red boat
Put a white sail in it.
Put blue water all round.

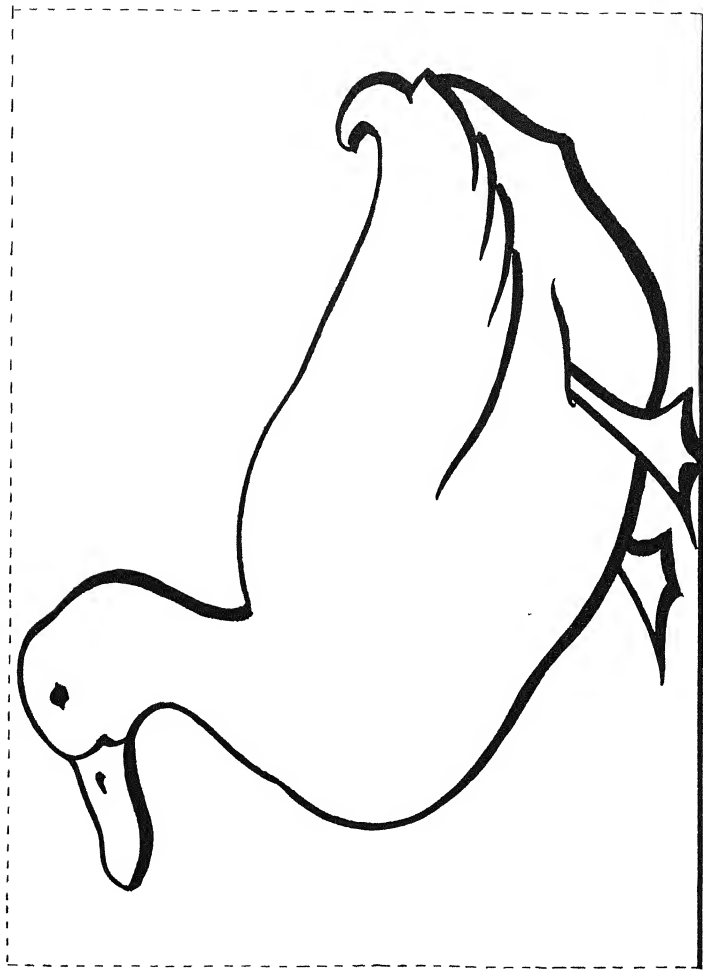
2. Draw a big white duck.
Draw three yellow ducklings in a row behind
3. Draw a pale blue sky.
Put grey clouds in the sky
Put a rainbow in the sky.

What the rain does.—Encourage the children to tell what the rain does; e.g.,—

1. Wets the earth. 2. Makes plants grow. 3. Fills the streams 4. Makes puddles in the roads 5. Fills the ponds 6. Fills the wells 7. Gives us water to drink. 8. Gives us water for washing 9. Patters on the window. 10. Washes the leaves.



TRACE-OUT FOR FRIEZE—DUCKLINGS
Trace this Drawing for part of the Frieze, *Picture No 31*

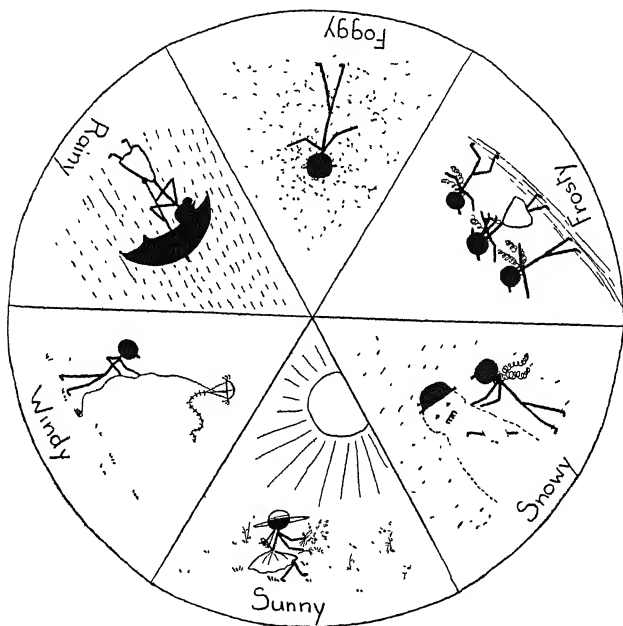


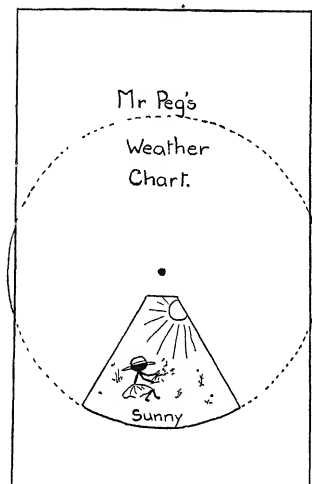
TRACE-OUT FOR FRIEZE—DUCK
Trace this Drawing for part of the Frieze, Picture No. 31

ACTIVITIES AND CONSTRUCTIVE WORK

Paper model—weather chart.—A simple but fascinating weather chart can be made from a sheet of stiff drawing paper, and a thin card. Cut a circle of card and with compasses mark the radius of the circle round the circumference to make six equal segments. In each segment draw a sketch illustrating different states of the weather—rainy, windy, sunny, snowy, frosty and foggy (See diagram) Cut the paper

nearly as wide as the cardboard disc and about one and a half times as long. On it draw round the disc in pencil, and at the bottom draw a segment corresponding in size to one of the divisions on the card. Mark the centre of the circle on the paper and cut out the segment, leaving an uncut portion next to the centre. Place the cardboard disc behind the paper, with the sketches facing inside, and fasten the two



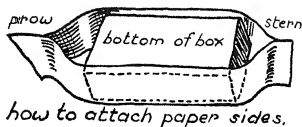


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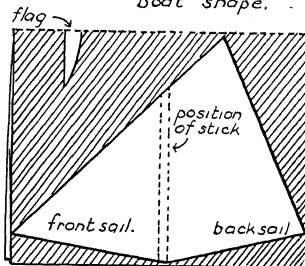
together with a paper clip passing through the centres of the circles as indicated in the diagram. The disc can now be rotated so that the state of weather is illustrated by the sketch showing through the opening in the paper. In the diagram the sketches illustrating the weather are stick figure drawings, so the whole has been called *Mr. Peg's Weather Chart*

Model with odds and ends—toy yacht.—For this model the following articles are required—a match-box tray or other small box without a lid, some light brown wrapping paper, a sheet of plain white paper, a blob of plasticine, and a twig or kindergarten stick about 6 in long

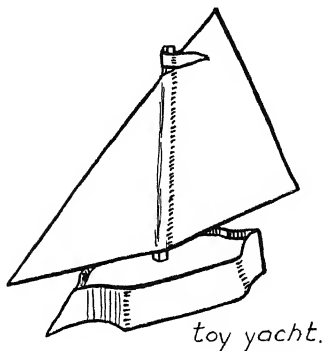
First make the sides of the yacht. Cut two strips of brown paper a little wider than the height of the sides of the box and



paper cover for boat cut from boat shape.



how to cut sails and flag.



about three times as long. Paste the two long sides of the box on the outside, turn it upside down and stick the middle of a strip on each side. Paste the ends of the strips together to enclose the box, trim the ends, making a short upright stern and a longer pointed prow.

To cover the boat, place it on a piece of brown wrapping paper, draw round the shape and cut it out. Paste the bottom of the box, insert the paper cover within the paper sides and press it down to stick to the bottom of the box.

Cut the sails, as shown in the illustration, from a piece of white paper folded double. Colour the positions of the mast and beams, and put markings on the sails, using brown

paint or crayon. Paste the inner sides of the sails; lay a stick down the middle of one, so that it projects a little way at each end, then press one sail over the other to enclose the stick. Attach a little paper flag to the top end.

Pierce a hole in the middle of the bottom of the box, stick a lump of plasticine on the inside to cover the hole, then push the end of the stick bearing the sails through the hole.

Older children can improve on this simple model by cutting the sails separately and tying them to the stick with cotton. A harbour of bricks can be built on blue paper or on a piece of blue material and a fleet of yachts enclosed.

STORIES TO READ OR TELL

THE TWO BROTHERS



(During the talks about rain, reference will naturally be made to the need of rain to make plants grow. Many children, whose fathers have gardens, will know how rain makes the vegetables grow large. This story can be fittingly introduced in connection with rain and the garden.)

THERE were two brothers who lived in the same city. One brother was very rich. He had a fine house in which were many boxes of gold and gems. He had horses and coaches, cows and sheep, fowls and ducks, and everything that man could wish for.

The other brother was very poor. He had to work all day long to get food for himself and his family. His house was in such a sad state, that all who passed that way felt sorry for him, except the rich brother who cared for no one but himself.

Early in spring the poor man dug his garden, got a packet of turnip seeds, and set them. He forgot all about the seeds, until one day his little girl called to him to come and see the tiny green shoots which were just showing. As the poor man and the child walked up and down in the garden, they saw one little plant that grew as they watched. They went to look at it many times each day, and it grew to such a great size, that all who saw it were filled with wonder. They called it the *Queen of the Turnips*, and when the time came, they could not pull it out of the ground. It was almost as big as their little house. For two days, the man dug and dug round the turnip before he could move it.

It seemed a pity to eat such a wonder, even if there was a pot big enough to put it in. Besides, the children said little turnips would be sure to taste better. So the poor man thought he might just as well take it to the king and offer it as a present. He got a large cart and two strong oxen, and went through the streets of the city to the great gates of the palace. Crowds of people rushed into the street to see the Queen Turnip pass by.

The king was sitting at one of the windows of the palace, and as he saw the Queen Turnip coming through the gates, he was filled with wonder. He opened the window and leaned far out. Then he called to the man to come up and see him, and tell him where so strange a thing had been grown, and where the seed had come from. The poor man came in with his old clothes, and the king was full of pity for him. The king asked the man about himself and his children, his house and his garden.

When he was told that one of the richest men in the kingdom was the brother of this poor man, he was more sorry than ever.

"You shall be as rich as he," said the king. "Although you are poor, you have worked hard, and given me of your best." And the king told his purse bearer to give him much money.

The man and his children were very happy. They now had a lovely house and garden. There was gold to spare, and a fine gilt coach for them to ride in when they wished to take the air. They, too, had horses and coaches, cows and sheep, fowls and ducks.

Now the rich brother heard how much money the king had given for a turnip, so he set his wits to work to think what gift he should offer, in order to find himself far better off than before. "If the king will give so much money for a turnip," thought he, "surely he will make me a great lord, if I give him some rich gifts." He took his best gems, horses, rich silks and gold and went to the palace. Fifty servants carried the grand presents, and walked behind the rich man as he entered the door.

The king knew well why the rich brother had brought him such fine things. "In return for your gifts I will give you something worth having," said the king. "It is the strangest thing I have ever seen." He then told his servants to give the rich man the Queen Turnip.

"After all," thought the king, "it is of no use to me. It will do well if it teaches that selfish man a lesson."

Playing the story.—In order to help the children to appreciate the story let them mime actions based upon it—1. Pretend you are digging. 2. Pretend you are setting seeds. 3. Pretend you are walking up and down the garden. 4. Pretend to pull up a turnip. 5. Pretend to be the king looking out of a window. 6. Look sorrowful for the poor man. 7. Pretend to think hard.

Missing words.—The following sentences can be dictated, or written on cards. The children have to fill the gaps with the correct words. This form of exercise trains

children to listen carefully when a story is read or told.—

1. Two brothers lived — (*in the same city*).
2. One brother was — (*very rich*).
3. The rich brother had many boxes — (*of gold and gems*).
- 4 The other brother was — (*very poor*).

- 5 The poor man dug — (*his garden*).
6. They called it the Queen — (*of the Turnips*).
- 7 It was almost as big as — (*their little house*)
8. He got a large cart and — (*two strong oxen*).
9. The king was filled — (*with wonder*)
10. Fifty servants carried — (*the grand presents*)

A NIGHT IN THE WOODS



HOW it rained! The fir-trees shook their heads, and said to each other, "Whoever would have thought this morning that the day would have turned out so wet?"

The rain streamed down from the grey leaden sky on to the trees, dripped from the trees on to the bushes, from the bushes on to the ferns, and then ran away in hundreds of tiny brooks, sometimes over soft green moss, sometimes tinkling over sharp stones.

The storm had set in in the afternoon; now it was almost dark, and the frog, who was taking a last look at the weather before he hopped off to bed, came to the conclusion that there was no chance of its being fine before morning.

An ant close by was of the same opinion. She had been overtaken by the rain while she was walking through the wood. Early

that morning she had started off to take her eggs to market, and was now carrying home the proceeds of her sale, carefully wrapped up in a small blue linen bag. At every step she sighed and groaned.

"My dress is ruined," she said, "to say nothing of my hat. Why *did* I leave my umbrella behind me? and how foolish I was not to put on my overshoes! It is quite out of the question to go any further in this rain with only my house-shoes."

While she was speaking she saw through the twilight an enormous fungus just in front of her. The sight of this cheered her wonderfully.

"The very thing," she cried, "I could not wish for a better shelter from the rain. I'll stay here till it is fine again. No one seems to live here. All the better! I'll lose no time in making myself quite at home."

And she was as good as her word. She was just in the act of emptying the water out of her shoes, when all at once she looked up, and saw standing outside a little cricket, carrying a tiny violin on her back.

"Friend Ant," called out the newcomer, "have I permission to take shelter here?"

"Come in, come in!" was the answer "I shall be delighted to have your company."

"I have been playing at the fair to-day," said the cricket. "I stayed till it was rather late, and so came in for the fury of the storm. How glad I am that I can spend the night here! The weather is quite abominable, and who knows if I should find another inn open?"

So in came the cricket, hung up her violin, and seated herself by the ant, ready to enjoy a good gossip. They had not talked for long, when they saw glimmering in the distance a very tiny light. When it was nearer it turned out to be a small lantern which a glow-worm was carrying in his hand.

"I pray you," said the glow-worm, making his politest bow, "to let me stay here for to-night. I really wanted to go to my cousin's, but I have lost my way in the wood, and am quite at my wits' ends."

"In with you!" cried both the ant and the cricket. "It will be all the better for us, for we shall profit by your light."

The glow-worm gladly obeyed the summons, and set down his lantern on the table. The light soon brought another wanderer to them. This was a beetle of the largest sort. He came stumbling awkwardly over the dead leaves and moss, and entered without so much as saying "Good-evening." "Oh yes," said he, "then I *was* right, after all, and this is the 'Foresters' Arns'."

With these words he took a seat, opened his knapsack, and began to devour his supper.

"Ah!" he went on, "how good everything tastes after a whole day spent in boring through wood!"

As soon as his meal was finished, he filled his pipe, and began to smoke comfortably enough.

In the meantime it had grown quite dark, and the weather seemed worse than ever. To everyone's astonishment, yet another belated traveller arrived. For some little time they had heard in the distance a curious kind of breathing, it came slowly nearer and nearer, and at last there appeared under the fungus a snail, who was quite out of breath.

"That's what I call running," said she. "I have raced like a centipede, and I really don't wonder that I am now suffering from a pain in my side. I must tell you at once that I had to deliver an important letter in the next village. But one can't go beyond one's strength, particularly when one has one's house to carry. If the company is agreeable, I will rest here for an hour or two, then I can gallop along as though I wanted to overtake the tram."

No one raised any objection, and so the snail sat down before the door of her house, took out her piece of knitting, and began to make the needles click.

There were now five unfortunates collected under one roof. The ant, as the first-comer, took the lead, saying, "Why are we all sitting so dolefully, and wearying ourselves to death, when we could so easily shorten our waiting time in a very pleasant manner? I was thinking that we might each tell a story, and I would willingly begin, if I only knew a very pretty one."

"But just this minute something far better has occurred to me. I see that the cricket has brought her violin with her. If she is really not too tired, I should like to ask her to play a merry little tune, so that we can have a dance."

The ant's proposal gave general satisfaction. The cricket did not need much pressing, but placed herself with her violin in the middle, and played the liveliest air that she knew by heart, whilst the others danced round her. The snail did not join in the frolic.



"I am not accustomed," she said, "to whirl round so fast, I get giddy so quickly. But dance as much as you like. I enjoy looking on and making my observations."

The others did not trouble themselves about her, therefore, and made such a noise that they could be distinctly heard quite three steps away.

But, alas! Suddenly their pleasure was interrupted by a terrible and unforeseen event.

The fungus under which the dance had taken place belonged, unfortunately, to an old toad. On fine days she sat on the top of her roof, as is the custom with toads, but when bad weather set in, she crept underneath, and then, as far as she was concerned, it might rain as it liked from Whitsuntide to Christmas.

Now, that afternoon she had gone over the moor to see her cousin the snake, and there had been so much to talk about over the coffee and plum cake, that it had got quite dark before she noticed how time was flying. Now, in the evening she came sneaking back quietly to her home.

She had a work bag hanging over her arm, and in her hand she carried a red umbrella with a brass handle.

When she heard the sounds of mirth coming from her home, she crept still more softly, and so it happened that the little people inside did not notice her till she stood in their midst.

This was an unwelcome interruption!

The beetle fell on his back with fright, and it was quite five minutes before he could get on his legs again. The glow-worm remembered when it was too late that he ought to have put out his lantern, so that he might have escaped in the dark.

The cricket let her violin fall in the middle of a bar; the ant went from one fainting fit to another, and even the snail, who was not generally put out of countenance, had palpitation of the heart. But she soon recovered and crept into her little house. Then bolting the door behind her, she said to herself: "Anyone may come that likes; I am not at home to anyone."

You ought to have heard how the toad abused the poor creatures!

"Just look," cried she, angrily swinging her umbrella right and left. "This is a nice collection of riff-raff! Do you suppose this is an inn for tramps and strolling-players? Just what I always say—one can't stir from the house lest some mischief be done. Pack up your traps this very moment, and then off with you, or I'll soon make you bestir yourselves!"

What *was* to be done? The poor little creatures, frightened out of their lives, did not dare to ask for pardon, but quietly took up their belongings, and calling through the keyhole to the snail to tell her to come with them as soon as she was ready, they all went away.

What a pitiful procession it was! The glow-worm went in front to light up the road, then came the beetle, then the ant, then the cricket, and last of all the snail.

The beetle, who was blessed with good lungs, called out from time to time, "Is there no inn anywhere?" But all his calling was in vain.

When they had gone a little way, they discovered that the snail was no longer with them.

They all shouted together, "Snail, snail, be quick!" but the echo of their words was the only answer. The poor snail was so

far behind that she was out of the reach of hearing the cries.

The others went sadly on their way, and after wandering about for a long time, they found a tolerably dry place under the root of a tree. There they passed the night in such discomfort that they hardly slept.

Although they had escaped safe and sound, it was, all the same, a disagreeable adventure, and they who took part in it will remember it as long as they live.

*Translated from the German
by E. Marshall*

STORY AND PLAY

STORY—THE VEGETABLE PIE



Introduction.—This original story is one which the children can readily dramatise. Read the story straight through to them once or twice, then discuss with them how to act it in one scene. Consider the setting, write the names of the characters on the board, and allot the parts. Read the story once more and let the children then act it, re-reading parts of it when the children are at a loss to proceed. A dramatised version, suitable for the Sixes and Sevens, which may be used at a school concert, is given at the end of the story.

Story.—Once in a kitchen garden, there grew some fine vegetables. There were cauliflowers, carrots, turnips, onions, leeks and celery, all standing side by side in neat rows. They belonged to Mr Biggs, and very proud he was that they had grown so well. He had planted plenty, so that all through the summer Mrs Biggs had been able to give her husband and daughter, Mary, a fresh juicy vegetable every day for dinner.

But now the winter was at hand, and Mr Biggs' vegetables were nearly all used

up. On a raw, cold day in autumn the vegetables that were left stood at the ends of the rows, looking sadly at the bare upturned earth, which reminded them of their lost brothers.

The largest vegetable was a fine Cauliflower, although a little run to seed, he considered himself the head of those who were left. He was much respected, for though he did not speak often, nor was he very clever, he had a deep voice which made what he did say sound very solemn and grand. There were still two Carrots, one Leek, a stick of Celery and three Onions. All of these were fine, big vegetables, except one of the onions, who for some reason or other had never grown properly, and remained as tiny as a spring onion. The other vegetables called him "Baby" and considered him the one of least account because he was so small.

These last vegetables were talking together on this autumn day. They were in low spirits, for they knew that soon they too would be taken from their home in the kitchen garden, and used to make a dinner for Mr. and Mrs. Biggs and their daughter, Mary.

The Cauliflower began the conversation "Friends," he said, in his deep voice, "we have spent a long and happy summer together."

"We are lucky to be left so long," said one of the carrots, trying to be cheerful.

"We are the last and oldest of our families," added Leek, with pride.

Turnip sighed. He was fat and white and miserable. "My twenty-first brother was taken for a stew on Saturday," he murmured, looking at the hole which his brother had left in the soil.

"I had so many brothers that I have lost count," remarked one of the Onions. "Now I have only one."

"Yes, dear brother," said the other Onion.

"What about me? I am your brother too," piped Baby Onion, for though he was small he was full of spirit.

"You are too small to count," said the first Onion.

But Baby Onion did not care. He was the only one who did not feel sad that day. He hoped that because he was so tiny he would be of no use in Mrs. Biggs' stewpot, and he was secretly looking forward to the day when the other vegetables, who looked down on him, would all be taken, and he should enjoy the privilege of being the only one in the garden.

"I wonder how long we shall be left?" said Celery.

"Not long," boomed the old Cauliflower, "I have a strange feeling at my heart which tells me that our time is near."

The other vegetables shivered. Only Leek said pertly, "Oh, bother your feelings! It is probably just a slug."

"Yes, Mr. Cauliflower," said Celery, "I know that feeling. I, too, have a twitching at my roots."

"Wireworm, my dear!" put in Leek.

"I really do not think we can expect to stay much longer," said one of the Carrots.

"They will be sure to pull us up before the frost comes," added his brother.

"When I think of my twenty-one brothers I could weep till I am dry and woody," mourned the Turnip.

"Fiddlesticks!" cried Leek. "I had thirty brothers, but they all left like brave Leeks, I would scorn to drop a tear over them."

"Mrs. Biggs will drop a tear over me!" said one of the Onions, making a joke to cheer them all up.

"Very true!" said his brother, laughing. "Ha! Ha! Very true. We *are* strong, you know, brother, even I can smell that. Ha! ha! ha!" And all the vegetables laughed together.

"He! he! he!" laughed Baby Onion suddenly, louder than any.

"Be quiet, you foolish little thing," growled Cauliflower. "You have no place in the jokes of your bigger and better brothers," said Celery, severely. "You are too small even to smell."

"He! he!" laughed Baby Onion, thinking of the time when he would be left alone in the garden. "He! he! he!"

"Be quiet, Baby, do you hear? *Be quiet,*" said Cauliflower, quite angrily.

"Yes, sir," said Baby Onion, pretending to be abashed, but turning his leaves to hide a smile.

Just at that moment the house door opened and who should come out but Mr. and Mrs. Biggs! He had a fork and she carried a basket.

The vegetables groaned, "Oh dear! Oh dear!"

Baby Onion giggled nervously.

Mr and Mrs Biggs walked straight to the kitchen garden.

"Well, my dear," said Mr. Biggs. "Here are the last of my fine vegetables. What do you want to-day?"

"I am making a vegetable pie, I think there are just enough left for it," said Mrs Biggs. The vegetables groaned again, but Mr and Mrs Biggs could not hear them.

"Do you want them all?" asked Mr. Biggs.

Mrs Biggs drew a paper from her basket. "Let me see," she said. "The Cookery Book says, 'Two carrots, one turnip, one leek, one stick of celery, one cauliflower and three onions'."

"Here are just enough for you, my dear," said Mr Biggs, digging them up in turn. (Oh, how they sobbed and wept! But he did not hear them.) When he came to the Baby Onion, he looked hard at the tiny thing and said, "Will two onions be enough? This little one is not worth peeling."

"These are nice and large," said Mrs. Biggs, looking at the other two. "They will do. That is all I want, thank you, dear." And Mr and Mrs. Biggs walked away with the vegetables in her basket, leaving Baby Onion in the ground, just as he had hoped.

Baby Onion nearly split his small sides with laughing as the others were carried off. "He! he! He! he!" he squealed. "Silly things, to talk so grandly and grow so fat! Now they are in a pie. I am too small to be peeled. He! he! He! he!"

Just then Mary Biggs ran by. Catching sight of the empty garden, she stopped.

"Oh, all the vegetables are gone!" she

said. Then she noticed Baby Onion standing up stiffly in the ground.

"Why, here is a tiny, baby onion left!" she exclaimed. "It is just the size for my doll's dinner."

"Oh, no! no! no!" shrieked Baby Onion.

But Mary could not hear him. She bent down, pulled him up, and ran off with him.

So Baby Onion was no better and no worse off than the others.

PLAY—THE VEGETABLE PIE

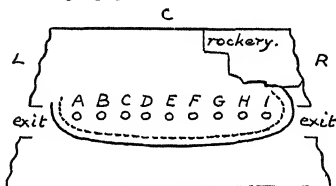
This entertaining and original play which is a dramatised version of the preceding story, is suitable for boys and girls of six or seven, and they and the audience will thoroughly enjoy it.

Characters in the play The Vegetables (all boys, if possible)—CAULIFLOWER, FIRST CARROT, SECOND CARROT, LEEK, TURNIP, FIRST ONION, SECOND ONION, BABY ONION, CELERY.

The Humans—MR BIGGS, MRS BIGGS, MARY BIGGS (a child).

Scene—A kitchen garden. There is an exit on the right (R) and on the left (L).

[*The Vegetables sit cross-legged on the ground, the Carrots and Onions in groups*]



ARRANGEMENT OF STAGE

- | | |
|-----------------|----------------|
| A—FIRST CARROT | E—BABY ONION |
| B—SECOND CARROT | F—SECOND ONION |
| C—LEEK | G—CAULIFLOWER |
| D—FIRST ONION | H—TURNIP |
| I—CELERY | |

Cauliflower (in a deep voice). Friends, we have spent a long and happy summer together.

First Carrot. We are lucky to be left so long.

Second Carrot. Very lucky.

Leek We are the last and oldest of our families.

Turnip. My twenty-first brother was taken for a stew on Saturday.

First Onion. I had so many brothers that I have lost count. Now I have only one

Second Onion. I am that one

Baby Onion (*in a squeaky voice*). What about me? I am your brother, too

Second Onion. You are too small to count.

Celery. I wonder how long we shall be left?

Cauliflower (*in its deep voice*). Not long I have a strange feeling at my heart which tells me that our time is near.

Leek. Oh, bother your feelings! It is probably just a slug

Celery. Yes, Mr Cauliflower, I know that feeling I, too, have a twitching at my roots.

Leek. Wireworm, my dear!

First Carrot I really do not think we can expect to stay much longer

Second Carrot. They will be sure to pull us up before the frost comes.

Turnip. When I think of my twenty-one brothers I could weep till I am dry and woody

Leek. Fiddlesticks! I had thirty brothers, but they all left like brave Leeks I would scorn to drop a tear over them

First Onion. Mrs Biggs will drop a tear over me!

Second Onion. Very true! Ha! ha! Very true. We are strong, you know, brother, even I can smell that. Ha! ha! ha!

All Vegetables (*laughing*). Ha! ha! ha!

Baby Onion. He! he! He! he!

Cauliflower (*gruffly*). Be quiet, you foolish little thing

Celery. You have no place in the jokes of your bigger and better brothers You are too small even to smell.

Baby Onion. He! he!

Cauliflower. Be quiet, Baby Onion, do you hear? Be quiet.

Baby Onion. Yes, sir.

Leek (*looking off*). Sh-sh-sh! The house door has opened!

Turnip. It is Mr. Biggs!

Celery. And Mrs Biggs!

First Carrot. He has a fork!

Second Carrot She has a basket!

Cauliflower My heart! My heart! I told you so, my friends, I told you so.

First Onion They are coming for us

Second Onion. Here they are!

All Vegetables except Baby Onion (*groaning*). Oh dear!

Baby Onion (*nervously*) He! he!

All Vegetables except Baby Onion Sh!

[*Mr and Mrs Biggs come in He has a garden fork and she carries a basket*]

Mr. Biggs. Well, my dear. Here are the last of my vegetables. What do you want to-day?

Mrs Biggs. I am making a vegetable pie, I think there are just enough left for that

All Vegetables except Baby Onion (*groaning softly*). Oh dear!

Mr. Biggs. Do you want them all?

Mrs. Biggs. Let me see (*Takes paper from basket and reads*). "Two carrots"

Mr Biggs. Two carrots One (*digs up First Carrot*), two (*digs up Second Carrot*).

[*Carrots line up behind Mrs Biggs*]

Mrs. Biggs "One turnip"

Mr. Biggs. One turnip (*digs up Turnip, which lines up behind Carrots*)

Mrs Biggs "One leek, one stick of celery"

Mr. Biggs. One leek (*digs up Leek*), one celery (*digs up Celery*). There are just enough for you, my dear. Any more?

[*Leek and Celery line up*]

Mrs Biggs. Let me see, (*reading*) "one pint of gravy"—no—"one cauliflower"—did I say that?

Mr Biggs. One cauliflower (*digs up Cauliflower*)

Mrs. Biggs. "And three onions"

Mr. Biggs. Onions,—one (*digs up First Onion*), two (*digs up Second Onion*), three—(*looks at Baby Onion*) will these two be enough? This little onion is not worth peeling.

Mrs. Biggs. They are nice and large, they will do That is all I want, thank you, dear.

[*Mrs Biggs goes out, L, followed by the Vegetables which have been dug up*]

Mr. Biggs They are the last of my Vegetables,—all fine and large, except that last little onion.

[*Mr. Biggs goes out*]

Baby Omon (*in its squeaky voice*) Silly things, to talk so grandly and grow so fat! Now they are in a pie I am too small to be peeled He! he! He! he!

[*Mary Biggs runs in, R, carrying a doll*]

Baby Omon Here is Mary Biggs, what does she want?

Mary Biggs Oh, all the vegetables are gone! Why, here is a tiny, baby onion left! It is just the size for my doll's dinner.

[*Mary pulls up Baby Omon and runs off with it, R*]

Baby Omon (*squeaking*) Oh! oh! Oh! oh!
Kate Lay.

SUGGESTIONS FOR A FULL PRODUCTION OF "THE VEGETABLE PIE"

Introduction.—The following notes will be useful to those teachers who wish to produce this play for a school celebration

Outdoor Performance.—This little play will form a delightful prelude to an exhibition of the school garden. It can be acted on a lawn, or in the playground, without scenery.

Indoor Performance.—The permanent backcloth (see page 36 in Volume I) with the opening closed, may have a row of coloured cut-out trees or hollyhocks sewn along it. Mr. and Mrs. Biggs will enter and leave by the left side wings, Mary Biggs by the right. A large brown mat, or several sheets of brown paper, on which the Vegetables kneel, represents the garden bed. Around the front and sides of the bed, green cloth, paper or moss, may be arranged to represent a grass border. A "rockery" near by of boxes irregularly piled up and covered with a cloth, with plants in pots artfully disposed upon it, will further suggest a garden.

The Vegetables may conveniently be placed in a row, facing the audience.

This arrangement of the Vegetables is shown in the sketch on page 953. If space permits, the Carrots and Onions may be arranged in groups and separated by spaces from the other Vegetables.



HEADDRESSES FOR VEGETABLES

Costumes.—The Vegetables may make and wear bib-labels bearing their names, the making of which is given on page 40 of Volume I. In addition, here are some simple headaddresses for the Vegetables.

The headaddress for *Leek* (Fig A) is made from a stiff piece of paper 21 in. wide by 10 in. high. A repeated drawing of leeks is made along it and painted with poster paint, or with water colour mixed with Chinese white. The ends of the paper are then gummed together and the headaddress is ready to wear.

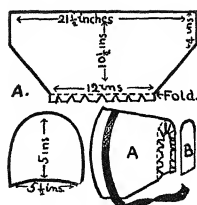
The *Omon's* headaddress is made from two pieces of green paper cut in an onion shape, each piece measuring $7\frac{1}{2}$ in. high, 13 in.

wide at the widest part, and $10\frac{1}{2}$ in. at the base. Lines in paint or crayon are drawn on. The two pieces of paper are then smeared with gum at the extreme edges on the inside, and stuck together, except at the base where the cap fits on the head.

The *Cauliflower's* headdress is made in much the same way as the *Onion's*. Two pieces of white paper are cut in the shape of a cauliflower, each piece measuring about 8 in high, 14 in wide at the broadest part, and $10\frac{1}{2}$ in at the base. To make the Cauliflower leaves, cut several strips of thin white card 7 in by 1 in., and twice the number of strips of green crêpe paper $1\frac{1}{2}$ in. by 8 $\frac{1}{2}$ in. Gather the green paper on one side only and then gum this to the white card—another piece of green paper is treated in the same way and gummed to the other side of the white card. You will now find that you have a complete cauliflower leaf. Make ten or eleven of these leaves. The headdress is now gummed together at the inside edges (but not at the base as the head fits there) and then the green leaves are added—they may either be sewn or gummed on. To finish the Cauliflower, paint or crayon a suggestion of the irregularities of the flower on the white part.

The headdress for *Carrot* is made from a triangle of dark stiff paper made like a dunce's cap. The triangle of paper is about 18 in in length, it is pointed at the top and 19 in wide at a point 2 in from the base. The bottom is slightly rounded. The Carrot is drawn and cut out from orange paper and gummed on the hat, and then green leaves are cut from green paper and pasted on also.

Mrs. Biggs wears a bonnet, shawl and apron, as shown in the sketch, and carries a basket. The making of the bonnet is shown in the diagrams; A is the brim and B the back part of the hat, which is gummed to A. A band of folded crêpe paper or ribbon



MRS BIGGS' BONNET

is pasted round the bonnet and tied under the chin in a bow. The shawl is a square of crêpe paper cut in a fringe all round and folded cornerwise. The apron is a piece of crêpe paper 13 in by 17 in gathered and sewn on a narrow band and tied round the waist.



COSTUME FOR MRS BIGGS

Mr. Biggs wears long trousers and a cap, and carries a spade.

Mary Biggs is dressed as a modern child of six years old, she carries a basket or a doll.

RHYMES AND POEMS

RAIN

(This poem is set to music on page 960)

The rain is raining all around,
It falls on field and tree,
It rains on the umbrellas here,
And on the ships at sea.

Robert Louis Stevenson.



BOATS SAIL ON THE RIVERS

Boats sail on the rivers,
And ships sail on the seas,
But clouds that sail across the sky
Are prettier far than these

There are bridges on the rivers,
As pretty as you please;
But the bow that bridges heaven,
And overtops the trees,
And builds a road from earth to sky,
Is prettier far than these.

Christina G Rossetti.

JEMIMA JANE

Jemima Jane,
Oh, Jemima Jane,
She loved to go out
And slosh in the rain.

She loved to go out
And get herself wet,
And she had a duck
For her favourite pet.

Every day
At half past four
They'd both run out
The kitchen door,
They'd find a puddle,
And there they'd stay
Until it was time
To go away

They got quite wet,
But they didn't mind,
And every rainy day
They'd find
A new way to splash
Or a new way to swim.
And the duck loved Jane,
And Jane loved him.

Marchette Gaylord Chute

THE DUCK

If I were in a fairy tale,
And it were my good luck
To have a wish, I'd choose to be
A lovely snow-white duck

When she puts off into the pond
And leaves me on the brink,
She wags her stumpy tail at me,
And gives a saucy wink,

Which says as plain as words could say
I'm safe as safe can be,
Stay there, or you will drown yourself,
This pond was made for me.

She goes a-sailing to and fro,
Just like a fishing-boat,
And steers and paddles all herself,
And never wets her coat.

Then in the water, upside down,
I've often seen her stand,
More neatly than the little boys
Who do it on the land

And best of all, her children are
The ducklings, bright as gold,
Who swim about the pond with her
And do as they are told

Edith King

WAITING AT THE WINDOW

These are my two drops of rain
Waiting on the window-pane

I am waiting here to see
Which the winning one will be.

Both of them have different names.
One is John and one is James.

All the best and all the worst
Comes from which of them is first

James has just begun to ooze,
He's the one I want to lose

John is waiting to begin
He's the one I want to win

James is going slowly on
Something sort of sticks to John

John is moving off at last
James is going pretty fast

John is rushing down the pane.
James is going slow again

James has met a sort of smear
John is getting very near

Is he going fast enough?
(James has found a piece of fluff.)

John has hurried quickly by
(James was talking to a fly)

John is there, and John has won!
Look! I told you! Here's the sun!

A. A. Milne

MY SHIP AND I

O it's I that am the captain of a tidy little
ship,

Of a ship that goes a-sailing on the pond,
And my ship it keeps a-turning all around
and all about,

But when I'm a little older, I shall find the
secret out

How to send my vessel sailing on beyond

For I mean to grow as little as the dolly
at the helm,

And the dolly I intend to come alive;
And with him beside to help me, it's a-sailing
I shall go,

It's a-sailing on the water, when the jolly
breezes blow

And the vessel goes a divie-divie-dive.

O it's then you'll see me sailing through
the rushes and the reeds,
And you'll hear the water singing at the
prow,
For beside the dolly sailor, I'm to voyage
and explore,
To land upon the island where no dolly
was before,
And to fire the penny cannon in the
bow.

Robert Louis Stevenson.

Snapshot drawings.—Draw outlines on a large scale of three or four "Men Who Help Us"; e.g., sailor, soldier, policeman. Cut out the silhouettes, and, when the children are prepared with drawing materials, hold one of the cards before them for a few seconds. Remove the card and let the children draw their impressions of the man. Afterwards pin the card on the blackboard and let the children correct their own drawings. Deal in the same way with the other cards.

APRIL SHOWERS

The leaves are fresh after the rain,
The air is cool and clear,
The sun is shining warm again,
The sparrows hopping in the lane
Are brisk and full of cheer.

And that is why we dance and play,
And that is why we sing,
Calling out in voices gay,
We will not go to school to-day
Nor learn anything!

It is a happy thing, I say,
To be alive on such a day

James Stephens.

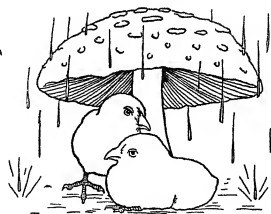
Questions.—Tell the children to pretend that each is a sparrow and tell or write answers to the following questions —1 Who are you? 2 Where do you live? 3 What do you have to eat? 4. How do you spend your time? 5 How do you show that you are pleased? 6 How do you show that you are angry? 7. What do you do when it rains? 8 How do you get food when the ground is frozen?

SHALL I SING?

"Shall I sing?" says the Lark,
"Shall I bloom?" says the Flower,
"Shall I come?" says the Sun,
"Or shall I?" says the Shower

Sing your song, pretty Bird,
Roses, bloom for an hour,
Shine on, dearest Sun,
Go away, naughty Shower.

Old Rhyme.



SONGS

RAIN

ROBERT LOUIS STEVENSON

PERCY G. SAUNDERS

Doh-Bb Lah-G

The rain is rain-ing

all a-round, It falls on field and tree, It

rains on the um-brell-as here, And on the ships at sea.

THERE WAS A LITTLE MAN

NURSERY RHYME

Arranged by
PERCY G. SAUNDERS

Doh = F || : .s₁ | d .d .d .d :s₁ .s₁ ,s₁ | l₁ ,l₁ .l₁ ,l₁ :s₁ .s₁ ,s₁ }

1. There was a lit-tle man and he had a lit-tle gun And his
2. He ear-ried it home to his old wife Joan, And
3. The drake was a swimming with his cur-ly tail, The

{ l₁ ,l₁ .d :t₁ .r | d .d :d .s₁ | d .d .d :s₁ .s₁ }

bul-lets were made of lead, lead, lead; He went to the brook, and
bade her a fire to make, make, make; To roast the lit-tle duck he had
lit-tle man made it his mark, mark, mark! He let off his gun but he

{ l₁ ,l₁ .l₁ ,l₁ :s₁ .s₁ | l₁ .d :t₁ .r | d .d :d ||

saw a lit-tle duck, And shot it through the head, head, head.
shot in the brook, While he went to fetch the drake, drake, drake.
fired too soon: And the drake flew a-way with a "Quack! quack! quack!"

LITTLE RAINDROPS

CAROLINE HAWKSHAW

PERCY G. SAUNDERS

Doh = C

1. Oh!

where do you come from You lit - tle drops of rain,
2. Tell me, lit - tle rain - drops, Is that the way you play,

Pit - ter, pat - ter, pit - ter, pat - ter, Down the win - dow - pane? They
Pit - ter, pat - ter, pit - ter, pat - ter, All the rain - y day? They

||d' | se :ba .se | l .s .f | m :ba .se |
 won't let me walk And they won't let me play, And they
 say I'm ve - ry naugh - ty, But I've noth - ing else to do But

||l :t t | d' :r' .r' | m' .m | s :-s }
 won't let me go Out of doors all day, They
 sit here at the win - dow, I should like to play with you. The

||d' .d' t l | s :m .s | d' .d' :t .l | s :l .t }
 put a - way my play - things, Be - cause I broke them all, And they
 lit - tle rain - drops can - not speak, But pit - ter, pat - ter, pat Means, -

||d' .l :t .s | l :f | s .f .m .r | d :- ||
 locked up all my books, And took a - way my ball
 "We can play on *this* side, Why can't you play on *that*?"

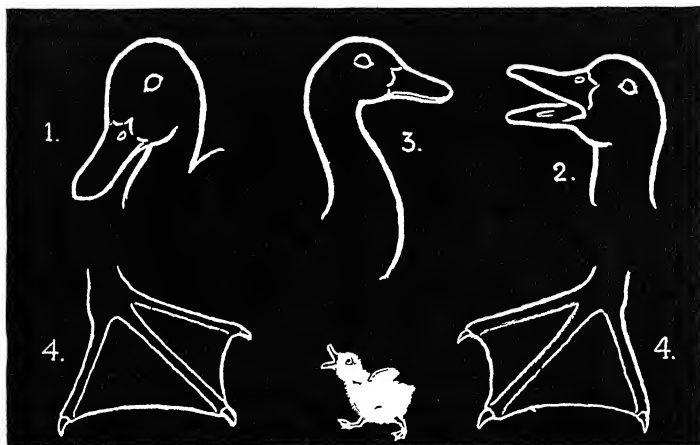
BLACKBOARD DRAWINGS

HOW TO DRAW THE DUCK

A SIMPLE way to draw a duck as it appears on land is shown in the three drawings at the top of the plate on the opposite page. The general proportions, the tilt of the body and the obtuse angle between it and the neck are first sketched. Then upon this skeleton shape the lines of the body are built and the details are finally put in. Three positions of the wings of the duck when flying are shown in the next sketches. The head of a flying duck is stretched out in line with the body; the

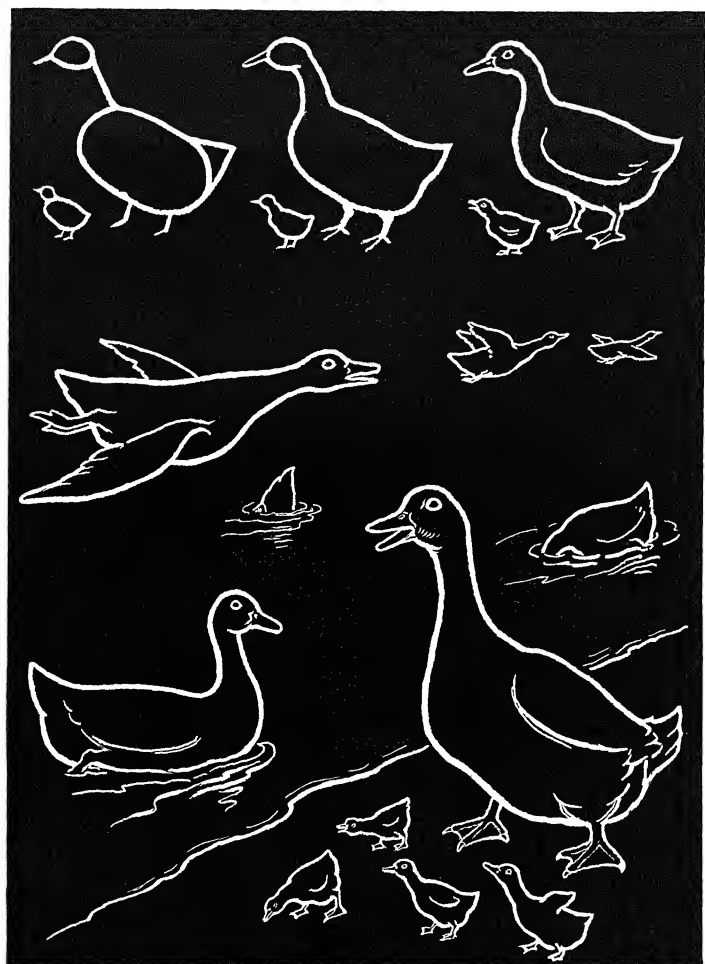
feet are also laid in line behind. The next drawings show the duck on the water. First there is the little tail, which is all we see of the duck when it is feeding at the bottom of the pond. Then, in shallower water, the duck's body remains on the surface of the water, while the supple neck is bent down. Finally we have drawn the duck swimming in its upright position. Notice that the angle between the neck and body is acute when the duck is swimming, and not obtuse, as when walking.

The half plate below shows further details in drawing ducks.



1, 2 and 3 DUCKS' HEADS

4 WEBBED FEET



HOW TO DRAW DUCKS

CENTRE OF INTEREST—THE WEATHER

XXVII. THE SNOW



THE LAND OF SNOW

Drawing in Outline of Picture No 32 in the Portfolio.

Introduction.—In connection with the talks to the children on snow, reference should be made to *Picture No 18* in the portfolio—*Little Peter Remembers the Birds in Winter*.

The talks are obviously best taken during the winter months. The first part of this section is mainly concerned with the life of the Eskimos, a subject which is always interesting to young children. There is, also, a short talk on the *Fur Trappers of Canada*, a subject suitable for a geography talk with the Sevens. The poetry, the domes of the Peg Family and the blackboard drawings are associated with winter conditions in England. The nature talks deal with the hibernation of some small creatures of the woods and fields.

Description of Picture No. 32.—This picture illustrates a typical scene in the frozen northland of Canada, at a time when the ice and snow begin to thaw, and form inland lakes like the one shown here. In the foreground of the picture we see a family of Eskimos. They have straight, black hair, black eyes, and yellowish-brown skin. Their faces appear to be flattened in front. The women make all the clothes from the skins of the seal, bear or deer. Everybody wears two suits—an outer and an inner. The inner suit has the hair next to the body, the outer coat and pants have the hair outside. The coat is pulled over the head and the hood fits snugly to the face. There are no buttons, strings or other fastenings. The woman's hood is larger than the man's, for in it, at the back, she carries her baby who does not need any clothes in his warm fur nest.

The Eskimo woman is very clever at making clothes. She cuts the skins with a knife, and sews them with neat, tiny stitches using a steel or copper needle and a thimble. To make the edges of the skins soft the woman bites them with her teeth until the edges meet close together.

The man holds a harpoon, with which he has just killed the seal at his feet. The

flesh of the seal is eaten, and the grease serves as fuel for the indispensable stone lamp used for heating and cooking during the winter.

One of the men sits in a hunter's canoe, or *kayak*, which consists of a bone or wooden framework over which a waterproof cover is stretched.

In winter the snow is perfectly dry, and the Eskimos travel in dog-drawn sledges, one of which can be seen with its team of dogs in the background of the picture. The Eskimo dog has long hair, a pointed snout and a tail like a chow's.

A snow house, or *iglu*, can also be seen near the sledge. Where there is little driftwood obtainable, snow houses are the common residences in winter. Even when stone and wooden houses are common, the snow *iglu* is put up on journeys, as it is quickly built and is impervious to weather. To build a house, a man cuts a trench some 5 ft long and 20 in deep in a snowdrift. From the face of the trench with his bone knife he prepares a number of snow blocks slightly concave so that they will lean inwards when set up on edge. He lays a circle of blocks and shaves them down, so that the succeeding layers form an ascending and narrow spiral. As he works he cuts new material from the inside of his house. A keystone is dropped into the space at the top, and all cracks and crevices are filled with snow. A man can finish a small house in two hours. When it is done, the housewife lights her blubber lamp, and closes the door with a block of ice. The snow inside begins to melt, and owing to the curve of the roof it does not drip, but the water soaks gradually into the blocks. When the woman sees that they are sufficiently soaked, she puts out the lamp and opens the door. The rush of cold air freezes the house in a few minutes, and it is then a very solid structure over which a Polar bear might crawl without breaking in the dome.

At the back of the *iglu* the woman makes a snow platform for sleeping. A plank of

driftwood is set up on snow blocks near the edge of the platform to make a table. Two poles are set in the snow to hold the lamp. Two more poles are stuck into the wall above the lamp, and from them the cooking-pot is hung over the lamp. For the bed, the woman lays on the platform a mat of willow sticks woven together. On

this she places a number of deer skins from which she is careful to beat out every speck of snow. Last of all come the sleeping-bags of deer-skin. They are soft, warm and comfortable.

(There is no frieze in connection with this picture.)

LANGUAGE AND SPEECH TRAINING

Conversation on Picture No. 32.—The children should freely describe and discuss the picture. To stimulate thought and observation, and to bring to the notice of the children any point overlooked, the teacher may make some of the following suggestions.—1 Tell how the people are dressed in the land of snow. 2. These people are called *Eskimos*. Tell how an Eskimo mother carries her baby. 3. Tell what lies on the ice at the man's feet. This animal is a *seal*. 4 Tell what the standing man holds in his hands. This stick with a knife at the top is called a *harpoon*. The man throws the harpoon at the seal to kill it. The cord he ties to the harpoon so that he can pull it back to him again after he has thrown it. 5. Tell what an Eskimo boat is like. It is made of skin. 6 The Eskimos travel over the snow in *sledges*. Find an Eskimo sledge. 7. The sledge is pulled by a team of dogs. Find the dogs. 8 How many dogs are there? 9 Find the Eskimo's snow house. Why do you think it is called a *snow house*?

Flash Cards.—The following sentences might be written on strips of card—

- 1 The Eskimos live in cold lands.
Eskimos do not mind the cold.
Their clothes are made of skins.
The women make the clothes
- 2 The men are hunters
They hunt the deer, the bear and the seal

The skins of the animals are made
into clothes

The men's boats are covered with skin.

- 3 Some Eskimos live in snow houses.
The houses look like basins
The people crawl into them through a
hole
There are no fires in their houses.
4. Inside a snow house is a snow platform
On the platform are many skins.
At night the Eskimos get into skin bags
They sleep on the platform.
5. The table is a plank of wood.
The lamp is made of stone
The oil for the lamp is got from the
seal.
The lamp keeps the house warm.

Missing words.—Say such sentences as the following for the children to supply the missing words—

1. The people in the cold north lands are called — (*Eskimos*)
- 2 Their clothes are made of the skins of — (*animals*).
- 3 The man carries a — (*harpoon*)
4. The animal lying on the snow is a — (*seal*)
- 5 The Eskimo's house is made of — (*snow*).
6. The Eskimos ride in a — (*sledge*).

Articulation.—Such sentences as the following afford useful practice in articulation.—

1. In his hand Hugh held a heavy harpoon.
2. Sue slid on the soft slippery snow
3. Dauntless David drove a dozen dark dogs
4. Few fishermen are fond of frozen fish

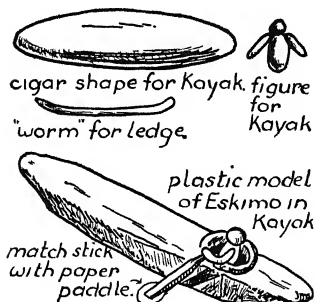
Choose the right word.—Write the following on the blackboard or on cards and let the children re-write the sentences, choosing

the right word to complete each sentence by reference to *Picture No. 32*.—

1. An Eskimo's house is made of (bricks, wood, snow).
2. An Eskimo's coat is made of (fur, wool, cotton).
3. Eskimos eat (bread, meat, cheese).
4. Eskimos catch (hons, seals, tigers)
5. Eskimos keep (dogs, horses, cows).
6. An Eskimo's house is (long, round, square).
7. Where the Eskimos live it is (warm, cool, cold).

ACTIVITIES AND CONSTRUCTIVE WORK

Plastic model—Eskimo kayak.—Roll a lump of clay or plasticine between the fingers to make a cigar shape. Flatten the cigar shape on one side by pressing it gently down on the modelling board. Make a hole near one end on the flattened side and round it fix a narrow collar, made from a flattened "worm" of plasticine. A tiny figure of a man may be made and put in the canoe, he is holding a paddle made of a piece of match stick with a paper end.



Paper picture—snow scene.—This is a picture which the Fives can make. Each child should have a piece of dark grey wrapping or pastel paper, about 6 in.-square, and some plain white paper. First tear a strip of white paper to represent the snow-covered ground, and paste it along the bottom edge of the mounting paper, tearing off the surplus white paper round the edges. Then tear out the figure of a snow man and paste it so that it stands on the white ground. Tear off plenty of tiny scraps of paper to represent snowflakes, and paste them on the background.

Older children can improve on this simple idea. Using scissors, they may cut out the figures of children in coloured paper and arrange a snowball match. They may add a brown house with a white roof, a tree, a robin, etc. When the paste is dry they may draw in the features of the snow man and add other details in colour or pencil.

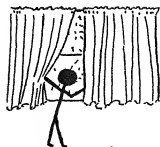
Alternatively, the older children may fold the mounting paper and bend up one half to form the background. They may cut out their figures with tabs at the base and paste them to stand upright on the horizontal half of the mounting paper, thus

A Snowy Day.

Peter got out of bed
first one snowy

morning. He ran to

tell the others about
the snow



Jim took a broom

to sweep the snow from
the path.



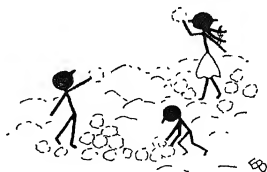
Dick, Dot and Peter put
on warm coats and

scarves, and went out to play
in the snow

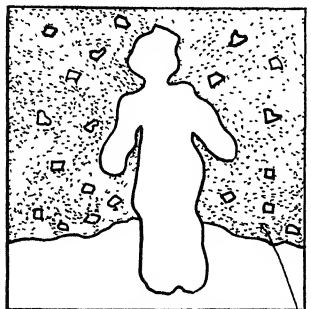
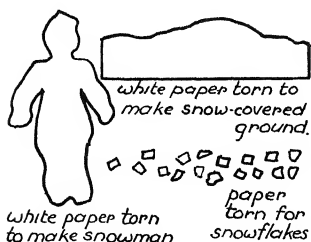


They made a fine big
snowman.

Then they had
a snowball fight.



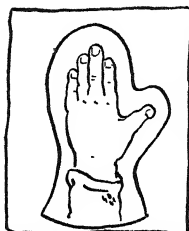
making an attractive stand-up picture for the windowsill



paper picture for the Fires

Model with odds and ends—pair of child's mittens.—The children can make these useful and attractive mittens as a gift for a small brother or sister, from odd pieces of any thick material, and wool or embroidery thread. Old winter dresses can be washed and cut up for this purpose.

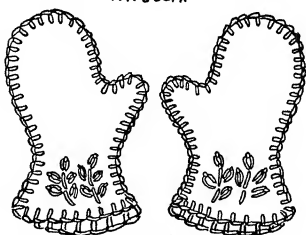
First make a paper pattern of the mitten. Lay the hand, with the fingers together, and the thumb pointing sideways, on a sheet of paper, and draw a pencil line round the hand as far as the wrist. (The child may take home a piece of paper and obtain



how to cut paper pattern of mitten



how to decorate each side of mitten.



child's pair of mittens

the shape of the baby's hand for whom the mitten is intended.) Then draw a cutting line outside this shape about $\frac{1}{8}$ in away from it, leaving a good space around and above the wrist

Cut out the paper pattern along this line. Place and pin the pattern on a double piece of material and cut round it. Cut out the second mitten in the same way. Finish the wrist edge of each piece of the two mittens with blanket stitch or oversewing in wool or embroidery thread. Now decorate the back piece of each mitten at the wrist. The sketch shows stems made in running stitch with leaves in "lazy daisy" stitch. Place the two sides of each mitten together and join them with blanket stitch or oversewing. The resulting

pair of mittens makes a splendid Christmas gift.

Co-operative group model, Eskimo colony—

Lay a small mirror for the sea in the foreground of a sand tray and cover the rest of the tray with flour, or salt, or powdered chalk. Place a number of snow houses made in clay or white plasticine on the land, and a plastic model of a kayak (already described) on the mirror. A number of brown Eskimos, with their dogs and a sledge may be made in clay or plasticine and added to the model. A seal may be modelled and laid on the land near an Eskimo figure. Finally, a greenish blue background with white rocks pasted on, is added.

GEOGRAPHY TALKS

THE ESKIMOS

Notes for the teacher.—The northern region of eternal ice approaches quite close to Canada. Greenland is mainly covered by a thick sheet of ice, from which portions break off in the warmest part of the year and are carried by currents into the Atlantic as icebergs. Parts of the coastal region of Greenland are sometimes free from ice and, here and there, Eskimo settlements are found.

The lands inhabited by Eskimos extend from Greenland across the cold, bleak islands of northern Canada into Alaska. The name Eskimo is said to have been given by Indian neighbours to signify people who eat their food raw. It is generally agreed that the Eskimos are in blood and language one kind of North American Indian, but they present an appearance very different from that of the Indians. Their hair is equally straight, but the skin lacks the warm brown colour of their southern neighbours. The head is large and long; the

nose is narrow and inconspicuous, which, combined with prominent cheek bones and broad face, gives a frontal appearance of flatness, the eyes are black, the hands and feet small, and the average stature about five feet. Since the advent of the white man their numbers have been greatly depleted, for they have succumbed in thousands to contagious diseases, notably measles.

The Eskimos live in many lands and in widely scattered communities, so that it is not possible to talk in general terms about their homes and modes of life, for these vary considerably. Some, for instance, are rich, educated men owning large herds of caribou (reindeer), others are poor and very primitive in their ways, some live during the winter in snow houses, others, the majority, have never seen a snow house, some have never seen a tree, others live on the margins of forests, some have been acquainted with firearms since the time of the American Revolution, others still hunt with bows and copper-tipped or

stone-tipped arrows. The nature of their food varies considerably. Some depend mainly on seal, some live chiefly on fish, others on caribou, and a large number live like Europeans. It is very important when teaching children about the Eskimo or any other particular people that sweeping generalisations should not be made. Every teacher knows that young children prefer downright statements, but when such statements are unwarranted they should not be made.

In northern Canada and Labrador there are from six thousand to eight thousand Eskimos who use snow houses in winter and skin tents in summer. Scattered Eskimo settlements dot the whole shore of the Canadian Arctic (with the exception of the southern part of Hudson Bay) and extend down the Labrador coast almost to Belle Isle. Without the snow house, life in winter would be impossible for the Eskimo in some of the inhospitable islands of the Arctic Circle.

At the end of the long winter, when the temperature rises, the snow houses begin to melt. Life in the iglu soon becomes uncomfortable, and the man and his family are glad when the weather conditions enable them to live in tents. Some of these are small three-cornered shelters, where skins are spread over a tripod leaving the lee side open. Others are larger, 6 ft. by 14 ft., with a ridge pole supported on a tripod at each end and a door in the middle of one of the long walls. This, like many of the snow houses, may contain two families, one to the right and one to the left of the door.

North of a line drawn from the middle of Bering Strait to the middle of the coast of Labrador, Canada is known as the "Barren Lands." During winter that part of North America is a barren, frozen waste, but during the short summer ice and snow disappear, the ground thaws to the depth of a few inches, and the land becomes a marshy swamp. Vegetation, under such severe climatic conditions, is necessarily

very restricted, and consists of mosses and lichens which can survive the long, dark winter. Small flowering plants bloom freely during the short warm period of the year, but mosquitoes are then very numerous. Towards the south of the "Barren Lands" stunted berry-bearing bushes, such as the cranberry, crowberry and whortleberry, are found. The swamps of the short summer, caused by the water from the melted snow and ice being unable to escape through the frozen ground beneath, are intensified by the addition of water from the rivers. The rivers flow from warm areas in the south to very cold regions in the north. The mouths of these rivers are still frozen when water from the upper courses is endeavouring to flow to the sea. Being unable to flow to the mouths of the rivers the water floods the land.

Life in the "Barren Lands" is a constant struggle for food. The Eskimo is dependent upon sea animals. Wild fowl, rabbits, caribou and bear are hunted during the brief summers, but seals and whales are more important than any of these. The flesh is eaten and the grease serves as fuel for the indispensable stone lamp used for heating and cooking during the winter. Wood is extremely scarce, but the Eskimos are skilful workers in bone, ivory and, to some extent, stone. Their chief weapons are lances and harpoons; the bow is made of bone and driftwood. Clothes are well-tailored, and the hunter's canoe, the kayak, is distinctive. It consists of a bone or wooden framework over which a waterproof skin cover is stretched.

In winter the snow is perfectly dry, and travelling by the dog-drawn sledge is comparatively easy. Considerable distances are covered in the search for food, and iglus are used as dwelling places. Snow shoes are worn by some Eskimos when they travel on foot over the snow. In summer overland travel is difficult, but water travel is easy. The kayak is then used in moving from place to place, and the dwelling place is a tent.

Talks to the children.—

The Eskimos.—The Eskimos live in Canada, in the land of ice and snow, far away from the white British people. When summer comes and the snow melts, father goes out on the sea in his canoe to catch fish. His pretty canoe is called a *kayak*. Its ribs are made of wood or bone, and the cover is made of fine seal-skin sewn tightly over the ribs. The man fits so neatly into the hole in the cover, that even if the kayak overturns, the water cannot get in through the hole.

The summer home of the Eskimo is usually a skin tent. Some people build their houses of logs, but in most parts of the land of the Eskimo trees cannot grow, and only a little driftwood, which is washed up on the seashore, is to be found. The tent is very quickly put up. The men put poles into the ground and stretch seal skins over them, weighting the skins at the bottom with stones. Upon a bench of earth inside they lay more skins to make a bed.

Travellers who visit the Eskimos during the summer find that the sun does not set. It shines all day and all night, and in some parts of the country daylight lasts for several weeks. Then the snow melts, pretty flowers bloom, and butterflies and bees are seen. The summers, however, are short. Bitter winter quickly comes, and there is then no sunshine for weeks together.

Some Eskimos build their winter houses of snow. This is an easy task for a man, as he can finish a house in two hours.

With his bone knife he cuts out blocks of snow and builds them in layers round and round, until he has made a house that looks like a large basin turned upside down. When he has finished, his wife goes inside, lights her lamp, closes the door with a block of ice, and waits. The lamp is a stone basin filled with fish oil or seal oil, on which floats a wick made of twisted moss. The little house soon becomes warm. Then the snow inside begins to melt, and when the inside is very wet the woman puts out the lamp and opens the door. The icy wind

blows through the doorway, and in a few minutes the inside of the house is frozen solid. Now it will stand secure all the winter, and the family of Eskimos can live happily together in the bitterest weather. They build a shelter for their dogs, as Eskimo dogs are used for drawing sledges over the frozen snow when the men go hunting for seals, polar bears and foxes.

The Eskimo has to wrap up well in fur clothes. You would find it hard to tell a man from a woman, they are dressed so much alike, but you would soon notice that a woman's hood is larger than a man's, and often you would see her baby inside it.

The Eskimos are mostly hunters and fishermen, and their food is mainly fish and the fat of seals and whales, which is generally eaten raw. They have no bread, and no milk, butter or cheese. They do not live in crowded cities, or grow wheat, or dig in the earth for coal.

Some of the Eskimos are rich men owning large herds of reindeer which supply them with milk. They eat bread and butter, cooked meats and fruits just as we do. They live in houses like those of the Canadians, and their children go to school and learn lessons. Many of them have never seen a snow house.

Eskimo dogs—In the cold land where the Eskimos live there are no horses for drawing carts and no trains. The Eskimos keep dogs for pulling sledges which are used instead of carts. The sledges have no wheels. They have instead smooth runners of wood which slide easily over the snow.

The dogs have strong legs and they can run very fast. They can run for many miles without getting tired. Eight or ten dogs are hitched to a sledge. On the sledge the man piles his skins and his food. Sometimes he sits on the sledge. Sometimes he runs behind it.

An Eskimo dog likes cold and snow. His body is covered with thick hair like fur.

His feet, too, are covered with hair, so that he does not get cold. When the dogs are tired with running they dig holes in the snow and crawl into them. The snow keeps them warm. The Eskimos take great care of their dogs. They give the dogs meat and fish even before they eat themselves.

The Fur Trappers of Canada—As you walk along the streets you will sometimes see a shop window full of beautiful fur coats and wraps which ladies like very much, because they are so warm and comfortable to wear. Many of the best furs come from the forests of Canada. In these forests live wild animals, such as the beaver, otter, marten, sable, muskrat, bear, wolf, fox and ermine.

Every year when the autumn comes round, trappers go to the forests to catch these wild animals in steel traps. They are caught during the winter, for then the coats of the animals are specially thick. A trapper takes with him a sleigh drawn by dogs. On the sleigh he packs a sleeping bag made of warm reindeer skin, for he will have to sleep in a rough hut which he must build of wood, snow and branches. He takes plenty of flour, salt pork and dried meat, for in the lonely forests there are no shops or houses. He must have matches to light his fire, and he carries a gun to shoot any animals that may attack him or which he needs for food, and besides these things he takes a number of steel traps. All day long he travels, sometimes riding in the sleigh, sometimes running beside it on his snowshoes.

When he sees the tracks of animals, he stops and sets his traps, cunningly hiding them so that the animals cannot see them. Sometimes if he wishes to catch a beaver, otter or muskrat, he sets his traps under water. At nightfall, when it grows too dark to journey any longer, he makes camp, lights a fire to cook his supper and to keep away prowling wolves or bears, gives his dogs a good feed of frozen fish,



and then, rolling himself in his sleeping bag, sleeps till morning.

In this way the trapper travels on day by day till all his traps are set. Then he is ready to turn back. Now comes the exciting time. What will he find in each trap as he comes to it? Sometimes he is disappointed, for the trap is empty. Sometimes it has caught a creature whose fur is of no use to the trapper. Now and then, however, the trapper's eyes glisten with joy as he sees in the trap a valuable animal, such as a beautiful silver fox, whose thick black fur is streaked with long white hairs which makes it look like silver. He kills the fox and carefully skins it, then he piles the skin or pelt on his sleigh and goes on to the next trap.

Day after day the trapper works hard, getting more and more pelts. At the first signs of spring, when the snow begins to thaw, the trapper makes for the trading station of the Hudson's Bay Company. This is a village of wooden houses and stores,

where men live, ready to buy the pelts from the trappers. Perhaps the trapper has hundreds of mles to travel with his load of pelts to the nearest trading station. He is very glad when he arrives there, for he meets many old friends who, like him-

self, have been trapping all the winter, and they have many stories to tell one another. The traders who buy the pelts send them to one of the great fur markets in London, Montreal, Winnipeg or Edmonton.

NATURE STUDY AND TALKS

WINTER SLEEP



THE subject of hibernation—winter sleep—can be only lightly touched upon with children of the infant school, as the habits of most hibernating animals are rarely observed by them. However, many children, and especially country children, may be led to ask, "Where do insects and animals go in the winter?" and they will be interested to hear accounts of how they protect themselves against cold and the shortage of food. The older children may be able actually to find certain creatures, e.g., snails, woodlice and frogs, in their passive state.

Brief accounts of the winter habits of the best-known creatures are given below:—

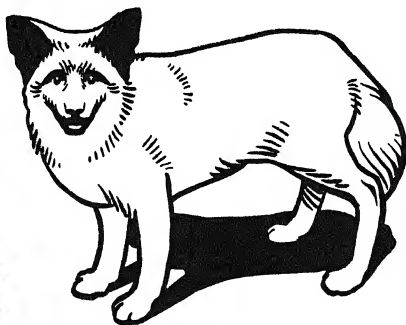
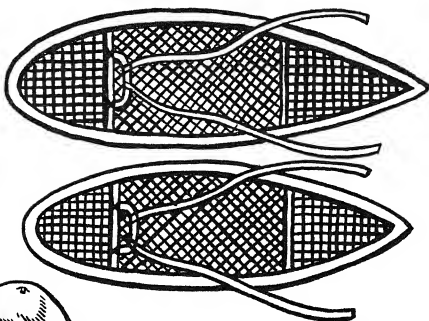
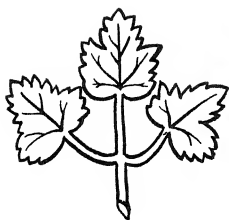
Insects.—The majority of *spiders*, *earwigs*, *bees*, *wasps*, *bluebottles* and *house flies* die during the winter, but occasional females

may be found "sleeping" in the sheltered crevices of fences and buildings, or in little holes in the ground, covered by moss or leaves.

Woodlice, *centipedes* and *millipedes* are usually easily found resting under stones, overhanging or decaying vegetation and in the bark of decaying trees. These insects rouse up when exposed to the light.

Most *butterflies* and *moths* die after laying their eggs, but occasional specimens of the tortoiseshell, peacock and brimstone butterflies may be found passive in sheltered nooks. Chrysalises and cocoons of various kinds may be found in the crannies of wooden palings.

Certain *beetles* burrow into the soil and rest there. The larva and pupa of the cockchafer also remain underground.



MAPLE LEAF

CONIFER

SNOWSHOES

SEAL

SILVER FOX

Colonies of *ants* will burrow deep underground, and, taking their stores of food with them, live an active life through the winter. A colony of yellow meadow ants was found in a London garden eighteen inches deep in the soil, about the roots of a rhododendron bush. With their instinctive foresight they had taken with them a colony of aphides, which were feeding on the roots, and giving their "milk" of honeydew when the ants stroked them.

Cold-blooded creatures.—*Earthworms* burrow into the soil below the level of the frost. When the cold is severe, several earthworms will become passive for a time, coiled up together, possibly for warmth, in a small round chamber excavated at the bottom of a burrow.

Newts and *frogs* remain passive during the winter hidden under dead leaves in ditches or in the hollows among the roots of trees.

Snails congregate in large numbers, lying one on top of the other with the mouths of the shells uppermost. The opening is closed by hard, thin plates, impregnated with lime (See *Volume I*, page 85.)

Slugs retract and hide away in sheltered nooks where the cold drying winds cannot reach them.

The *tortoise* makes a hole in the ground and buries itself under leaves.

Warm-blooded animals.—The prickly *hedgehog* makes its nest in a hollow in the ground, lining it with moss and dry grass. From the outside it looks like a pile of leaves. The hedgehog curls himself up in its nest and sleeps all through the winter without feeding or moving. This is a complete winter sleep, during which the temperature of the body is lowered and breathing is considerably reduced.

Another familiar example of an animal

which exhibits a complete winter sleep is the *bat*. The bats hang themselves head downwards, with their wings folded, and they hook themselves on to some rafter or projecting piece of rock in old barns, churches, towers and caves. They are enabled to hang by a curious long curved claw on each thumb.

The *squirrel* usually occupies the old nest of some large bird and builds a roof of twigs over it leaving only a small round opening. Stores of nuts and seeds are left in convenient nooks and crannies close by. The squirrel does not sleep all the winter, like the hedgehog and bat, but is much less active than in the summer. It may sleep for days together and then come out to visit its supplies of food. In a severe winter it may nibble the buds and bark of trees.

The *dormouse* is a near relative of the squirrel, and like it, spends the winter in a partial winter sleep. For this the dormouse betakes itself to a hole in a bank or among tree roots filled with drifted leaves. Near its nest is a larder where it has made a store of food, which it can visit at intervals during the winter months. (A nature story of the dormouse is given in *Volume I*, page 340.)

Field mice retire into holes in the ground and spend the winter in a partially active state, living on the roots of plants and a store of berries and nuts made in another hole a short distance away.

There is a popular belief that if the winter sleep is broken the animal dies. Possibly this is true of the lower creatures, but observers believe that it is not true of bats and other higher animals.

In many cases of complete winter sleep it is difficult to see how the animals manage to breathe, but probably life is at so low an ebb, and the energy used up is so slight, that a very small supply of air is sufficient

A STORY TO READ OR TELL

HOW PUSSAY FISHED FOR
A BEAR!

"COONEE and Pussay, go down to the sea, and get some fish! The ice is breaking up, the sun is shining, the summer is coming again."

So said the Eskimo to his children

Eskimo means "eater of raw meats," and this man lived with his wife and two children, in a snow hut, or iglu, all the winter up in Labrador, which you will find in your maps of North America

Summer had come, but still there was plenty of snow and ice everywhere, though the ice was beginning to break away and sail off to the ocean in great masses, like islands, which we call icebergs

As I have already mentioned, the names of the two children were Coonee and Pussay.

Coonee means "a Kiss," and that was the girl's name; Pussay means "a Seal," and the boy was so called

So that morning Coonee and Pussay left the iglu, and went out to fish. Their father and mother sent them out, they must not be idle, so the children took the fishing-lines, a kind of pot to carry the fish in, and some bits of seal meat for bait

Off they set in the burning sun, for when the sun shines up amid the ice and snow it burns fiercely. Still, the children were well wrapped up in thick fur coats, leggings, and furry caps, their hands were cased in gloves of fox-skin. They did look such queer little things, but they went out together very bravely

I do not suppose that any of us would like to cross the snow and ice to the side of the sea where the ice was cracking and crashing with a noise like cannon, roaring as it fell sometimes in a great big mass from the cliff, and crushing the blocks in the water.

But Coonee and Pussay had to go, and they went. They could not read or write, but they could hunt and find game, paddle a canoe, fish, and throw a spear at a seal very cleverly.

"We shall be certain to find some fish here, Coonee," said brave Pussay. "If we can reach the ledge of the ice we shall be safe."

"Oh, Pussay," cried Coonee after a while, "see there! Are those the footmarks of a nenook or a tuk-tuk?"

Nenook is bear, and tuk-tuk is reindeer. Coonee should have been able to distinguish the one from the other, but in the soft snow the impression was not clear

"Oh, Coonee, it is a nenook, but never mind. It has gone away, no doubt, and we *must* catch the fish!"

So they scrambled over to a ledge of the ice, the end of an enormous cape, where they knew the fish would be swimming in the open water

But they had not been there very long, and had only caught two fish, when they heard a cracking noise—a curious rending, tearing sound which greatly alarmed Coonee. Although she knew it was only the ice, she was afraid that the cape would fall away, or become separated, and then what would the children do?

Pussay did not move, he cast his line and hauled in another fish. Then he put a large piece of seal meat on the big hook, and threw it as far as he could into the sea; but the tide seemed to carry the line round the corner of the cape, out of sight. He grasped the end, and waited for the big fish he expected

"The line is moving, Pussay," whispered Coonee. "Look, it is dragging through the water!"

"Then we are moving, Coonee The ice is sailing away We are drifting out to the great sea where the sun rises! We are lost! Let us climb up and see"

Pussay fastened his line tightly, and climbed up the cliff of ice and snow to a little distance Coonee could not climb so well as her brother, and she remained on the ledge, nearly crying, but silent

After a while, Pussay came down very white all over, for his face was pale and his clothes were covered with snow

"The ice is moving," he said sadly "Oh, Coonee, think what we can do!"

"I cannot think, Pussay," she replied "My heart is frozen, We must die here, far from the iglu I wish we could see a kayak, but there is not one anywhere in view"

"Let us go back to the water, perhaps we may see something there"

They went back, and Pussay threw his line in again He had baited it well, and, as he and his sister were wondering how they could escape, the line was pulled so suddenly and so roughly as nearly to drag the lad into the water

"There is a big fish yonder," said Pussay. "It will give us trouble Help me to pull"

Coonee came and helped, but the line gave no trouble It came more quickly towards them than they could pull it in

Suddenly Coonee let fall the line and slipped down in her fright

"Nenook, nenook!" she screamed "It is here Look! Look!"

Pussay did not require to be told to look In the water close by he could see the fine but terrible white head and fierce gleaming eyes of a white bear, which the line had partly pulled, partly assisted, to land on the berg

Coonee clutched her brother's arm as the animal came on Pussay backed against the icy wall behind him, unable to stir He was numb with fear

The white bear, hungry after the winter fast, would very quickly make a meal of him and his sister. They had no harpoon

or spear, and if they had, how could they expect to use it against such a monster?

At that terrible moment Pussay said,

"Run away, Coonee! I will stay You may escape"

He was fond of his sister, but Coonee would not stir She would not leave him, she was afraid

By this time the bear was clinging to a knob of ice, and trying to raise itself up to the sloping ledge on which the young fishers were standing

The bear could not at once gain a footing on the ice Its eyes were gleaming as they gazed at the fish, but when they were turned on the children the look became fierce

"Let us climb up, if we can, before he reaches us," said Pussay.

The brother and sister started off, not knowing whether they were going They scrambled over rough ice blocks, slipped into the water at times and narrowly escaped being drowned Still they hurried on

"We can climb up there," cried Coonee "Let us go The bear may not see us or scent us up there"

They managed to climb up, and panting, sat down to rest

"Here comes the nenook," cried Coonee "He scents us. See?"

"Let us try to loosen some blocks, and roll them down," said Pussay

They managed with some difficulty to loosen three large masses which the sun had half detached, and the children stood ready to roll them down

The bear appeared, looked up, growled, and continued his way very leisurely, but surely, in the direction of the ice chasm

"Wait until he is crossing," whispered Pussay "Help me, Coonee Now, push hard!"

Away slid, and then rolled, the block of ice The bear did not see it—he was planting his feet very carefully, not looking up Dash came the ice, "Gurr-r-r," growled the bear

"Another," shouted Pussay, and in a moment another block came after the first just as it reached the bear

He was knocked off his feet by the first block, and the next hit his head, and he tumbled down, still growling and snarling, into the big gap in the ice

"Down, down!" shouted Pussay "The umiak! Quick!"

The big boat had come in sight. The people had seen the ice cape sail away, and had come to rescue the brave girl and boy.

Pussay and Coonee told about the bear, which was soon killed, and the whole tribe had a grand feast that night upon the animal which Coonee said she and Pussay at first thought was a fish!

"But a very queer fish, Coonee," said Pussay while they were at supper "Still he tastes very nice, doesn't he?"

*By kind permission of
"The Amalgamated Press"*

RHYMES AND POEMS

FALLING SNOW

See the pretty snow-flakes
Falling from the sky,
On the wall and house-tops
Soft and thick they lie

On the window-ledges,
On the branches bare,
Now how fast they gather,
Filling all the air!

Look into the garden
Where the grass was green,
Covered by the snow-flakes,
Not a blade is seen

Now the bare black bushes
All look soft and white,
Every twig is laden,—
What a pretty sight!

Anon

LITTLE WHITE FEATHERS

"Little white feathers,
Filling the air—
Little white feathers,
How came ye there?"
"We came from the cloud-birds
Sailing so high,
They're shaking their white wings
Up in the sky"

"Little white feathers,
How swift you go!
Little white snow-flakes,
I love you so!"
"We are swift because
We have work to do,
But hold up your face,
And we'll kiss you true"

Mary Mapes Dodge

SNOW IN TOWN

Nothing is quite so quiet and clean
As snow that falls in the night,
And isn't it jolly to jump from bed
And find the whole world white?

It lies on the window ledges,
It lies on the boughs of the trees,
While sparrows crowd at the kitchen door,
With a pitiful "If you please!"

It lies on the arm of the lamp-post,
Where the lighter's ladder goes,
And the policeman under it beats his arms,
And stamps—to feel his toes,

The butcher's boy is rolling a ball
To throw at the man with coals,
And old Mrs. Ingram has fastened a piece
Of flannel under her soles,

No sound there is in the snowy road
 From the horses' cautious feet,
 And all is hushed but the postman's knocks
Rat-tatting down the street,

Till the men come round with shovels
 To clear the snow away,—
 What a pity it is that when it falls
 They never let it stay!

Rickman Mark

THE WHITE SEAL

Oh! hush thee, my baby, the night is behind
 us,
 And black are the waters that sparkled so
 green.

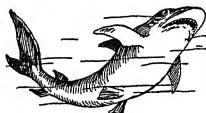
The moon, o'er the combers, looks down-
 ward to find us

At rest in the hollows that rustle between
 Where billow meets billow, there soft be
 thy pillow,

Ah, weary wee flipperling, curl at thy ease!
 The storm shall not wake thee, nor shark
 overtake thee,

Asleep in the arms of the slow-swinging
 seas.

Rudyard Kipling.



SHARK

THE SEASONS

January brings the snow,
 Makes our feet and fingers glow.

February brings the ram,
 Thaws the frozen lake again.

March brings breezes loud and shrill,
 Shakes the dancing daffodil

April brings the primrose sweet,
 Scatters daisies at our feet.

May brings flocks of pretty lambs,
 Skipping by their fleecy dams.

June brings tulips, lilies, roses,
 Fills the children's hands with posies

Hot July brings cooling showers,
 Apricots and gillyflowers



DAFFODILS

August brings the sheaves of corn.
 Then the harvest home is borne.

Warm September brings the fruit,
 Sportsmen then begin to shoot.

Brown October brings the pheasant,
 Then to gather nuts is pleasant.



PHEASANT

Dull November brings the blast,
 Then the leaves are whirling fast.

Chill December brings the sleet,
 Blazing fires and Christmas treat

Sara Coleridge

SONGS

THE NORTH WIND

OLD RHYME

PERCY G. SAUNDERS

Doh = F

The north wind doth

blow And we shall have snow, And what will the rob - in do

then, poor thing? He'll sit in a barn, And keep him - self

warm, And hide his head un - der his wing, poor thing!

WHITE FIELDS

JAMES STEPHENS

PERCY G. SAUNDERS

Doh=E Moderato

1 In the win - ter
2 Point - ing out the

time we go Walk - ing in the fields of
way we came, Ev - 'ry one of them the

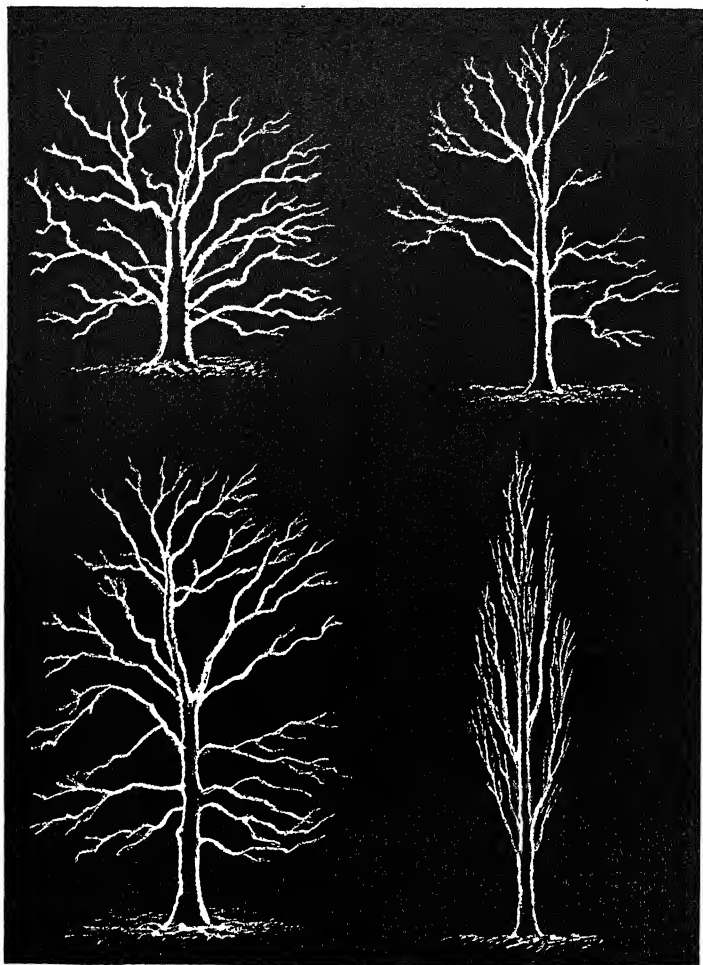
snow; Where there is no grass at all;
same, All a - cross the fields there be

Where the top of ev - 'ry wall,
Prints in sil - ver fil - i - gree;

Ev - 'ry fence, and ev - 'ry tree, Is as white as
And our moth - ers al - ways know, By the foot - prints

white can be. snow.

Where it is the child - ren go.



OAK

ELM

PLANE

POPLAR

TREES IN WINTER

CONSTRUCTIVE WORK IN THE INFANT SCHOOL

By ENID BOSWARD

PART I. FOR CHILDREN FROM FOUR PLUS TO FIVE PLUS.

Introduction.—A small child is an investigator first, then a creator. For both these rôles he can, up to a point, equip himself, with remarkable success; but soon there comes the time when he needs aid and suggestions from people older than himself, he requires, too, an environment somewhat more specific and probably richer in materials and opportunities than has satisfied him hitherto.

The nursery school child or the pre-school child of three to four years can be profitably and happily employed, at adult suggestion or in imitation of the adult activity, using small scissors and paper, large blunt needles with coarse wool or cotton, paste and brush, paint and paper, even hammer and nails—to make *something*. What the something is matters little to him. The activity, the *doing* is the important part for him,—and for us, too, as his future educators. For in his activity the child has chosen his task and his tools, he has concentrated, reasoned and judged with regard to his materials, in so doing he has progressed far in knowledge—knowledge which is certainly implicit, but nevertheless genuine,—of the qualities of those materials, the skill and control necessary for the manipulation of the particular tools he has chosen. Lastly, but perhaps most important of all, he has experienced the joy and satisfaction of being a *doer*, a creator, he has revealed himself to himself as an individual capable of self-expression.

In this manner the attitude of mind “healthy for all learning” is easily and

naturally engendered, and how it can be preserved and developed progressively throughout the infant school stage, is one of our great problems. It would seem then, that the nature of our task is to give these young friends of ours—experimenters, investigators and would-be creators, as we have called them,—as much experience as possible with materials and with the tools connected with them, as well as to give them time and opportunity to choose and use from the assortment.

The relation of handwork to daily programme.—Take then our infant of four plus to five years old, for him the time table should be in the nature of a daily programme with broad divisions. In the morning he first takes part in various activities of a domestic nature,—the care of the classroom, and its preparation for different activities; in the second period, which is devoted to intellectual pursuits preparatory to and connected with the use of books, again he is often actively busy, manipulating toys and materials of an educative nature; later, during that same morning, he may be involved in an experience common to the whole of his class or group,—such as gardening, or making or doing something in connection with the home or people round about him. All this *doing*, this active experience, cannot be divorced,—either in a child’s mind or in ours as his guides and trainers,—from the activities that are more generally termed and thought of as handwork or constructive work. If we are to do our handwork properly, we must regard it as being *real* work, as these activities are real

experiences, purposive and useful. Unless we aim from the outset at reality and purposiveness in all our handwork tasks, unless we show handwork from the beginning as being of some use, something that "helps you to live your own life here and now, more freely and better," then one of the most important claims of handwork as a subject worthy of inclusion in the curriculum is in a fair way to be lost, probably permanently.

In the afternoon of the same day, after rest, or for a section of the class while other children rest, come the opportunities for what are all too commonly regarded as the *real* handwork of the infant school—the small occupations with materials such as paper and clay, that make such demands upon the ingenuity of the teacher, for at times it would seem that there is nothing sufficiently easy for these small fingers to do. At this point it will be comforting and helpful for the teacher to ask herself what she hopes the children will gain from these periods, firstly, as individuals, and secondly, as members of the class or section of school society. After due consideration, it appears that her work falls into four distinct categories or classes, which are infinitely easier to cater for, and pay attention to, than that wide, rather undefined subject—handwork.

PLATE I DOMESTIC EQUIPMENT —

This plate shows the various articles required for domestic duties in the classroom. Small folk find the daily domestic tasks much more acceptable and interesting if they dress for the part and behave like adult performers. Therefore a wise teacher will provide, not only equipment of the right size, but also extra attractions, such as gay, serviceable little aprons, and dusters differently coloured for different purposes. Articles such as pails, dustpans and brooms may be painted with a quick-drying enamel to accord with the colour scheme of a particular classroom. The golden rule in connection with all equipment must be, "A place for everything and everything in

its place,"—except when an article is in use. All clearing-up should be undertaken in the play-spirit, and will become a joyous responsibility when the children are trained in the use of attractive equipment.

Aim of the handwork periods.—We may say that the aim of the handwork periods during a week is to provide the five-year-old with the following experiences —

1 He encounters a variety of materials and tools with which to work and play

2 He finds gradually through paper, clay, paint, etc., a means of expressing his ideas, and making or keeping his own little records of work in other subjects

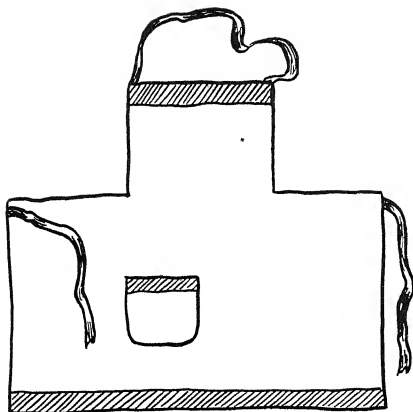
3 He learns to supply his own or classroom needs in the direction of work or play

4. He finds outlet for his constructive play tendencies in the making of simple toys

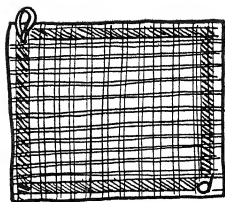
We may be able, considering that so much time can be given to handwork, to plan our work so that a period can be given to each type of experience during the week. Or we may so group our work and train our children that several types of experience may be going on in the classroom at the same moment. To pursue either of these methods effectually, it is necessary to organise the work, to train the children in independence, and to believe that the thing is possible,—for it is.

I HANDWORK PERIOD SUPPLYING A VARIETY OF MATERIALS AND TOOLS

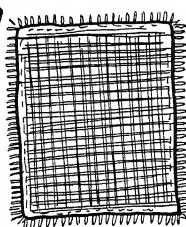
The period in which a variety of materials and tools is to be encountered for work and play purposes is best placed either at the beginning or at the end of the week, and the children ought to be prepared for its coming, so that the most forth-stepping and active members of the class know what they are going to do, and perhaps even have ideas as to how they are going to do



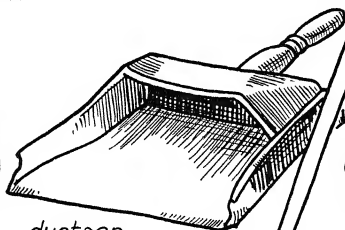
apron.



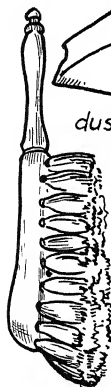
duster



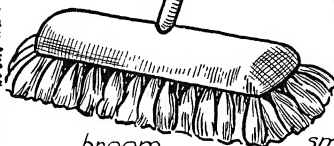
floorcloth



dustpan



brush.



broom.



small galvanised pail.

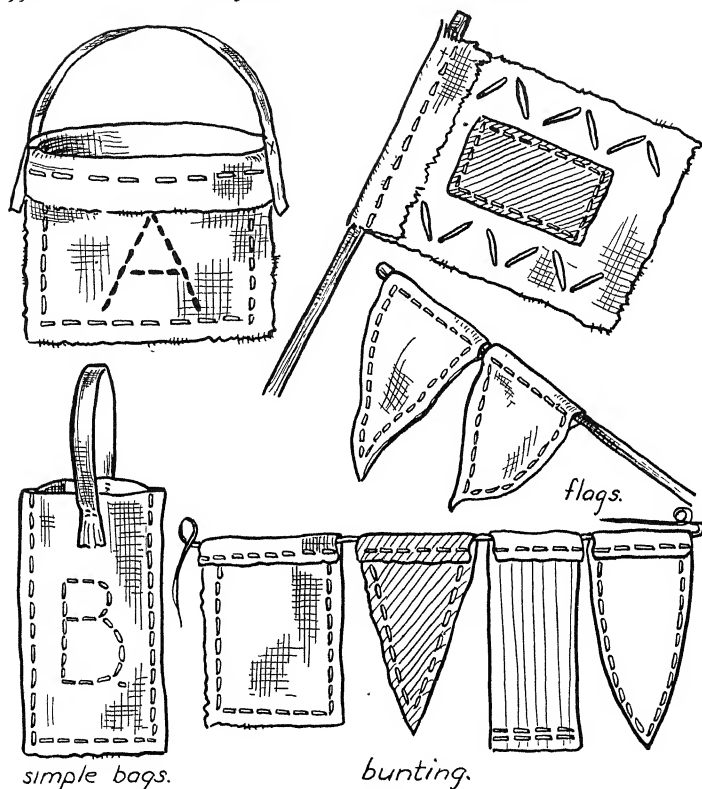


PLATE II SEWINGS

it. The organisation of the room and materials is important; also it is necessary that the children should know what types of activity will be possible, for it is not good to give too large a choice at first. The range may be extended as children show themselves increasingly able to use less precisely directed opportunities.

Sewing.—Materials for sewing—large blunt needles, several pairs of scissors, a basket or bag of gay pieces—may provoke a group of both boys and girls to make a bag, a flag, a handkerchief, a purse, even a rag baby, or clothes for a school or home doll. At first the work is entirely self-directed, several such articles may be made in one

period. None may bear any resemblance to the article which it represents, it may be so formless that even the maker contentedly names it just "sewing," but it is infinitely precious in his sight, and ought to be well worth while in ours

PLATE II. SEWINGS. *Simple bags.*—In making bags, tacking stitches are used, and raw edges come on the outside, unless the small worker objects, and then we obligingly show him how to turn it to what he insists is the "right side." A pencilled initial, or some simple device that he directs us to draw for him, or draws for himself, is generally the last touch to these sewing constructions, and thus he tacks in a colour of his own choice, so that the article is truly his own.

Flags—Flags can be made large enough for classroom decorations, and individual or group plays and games, or they may be small enough to be used in the sand pit or tray, occasionally they may even be prepared for a holiday at the seaside, though perhaps for this purpose the paper flag is best. Generally, the colour of these flags matters very little to the worker,—unless he intends to be a railway guard, when it is very important,—usually he takes what comes in the way of both material and colour. The size of the material or the vividness of its colour generally determines his choice, and it is a flag to him when he has made it, whatever its appearance may be to the average beholder.

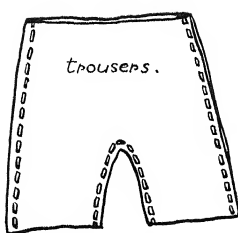
Bunting—The making of bunting, as shown, is a co-operative activity, and affords a valuable exercise in colour training, if care is taken to provide sizeable pieces of material of good pure colour.

PLATE III. DOLLS' CLOTHES AND SIMPLE RAG BABIES—The dolls' clothes on the plate are made in the same way as the "sewings" already described. The material is held together by tacking stitches,

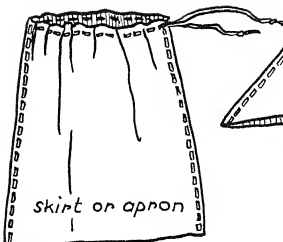
and raw edges are left on the outside. Lengths of wool with knotted ends are used for tapes and strings.

The rag babies shown in the illustration are bundles of folded material tied up with wool. The faces are drawn or painted on and the hair is added with paint or in wool. The dolls are dressed in clothes made from odd scraps of material. Very few dolls reach the state of completion illustrated here. If the worker is quick and inventive they may be finished, but generally they are not, for the making must occupy just the length of time that the interest holds, and there can be no work carried over from one day to the next, save perhaps in making an article as a present for the doll, such as a necklace, a little purse, apron, flag, or even a tiny dolly for her plaything

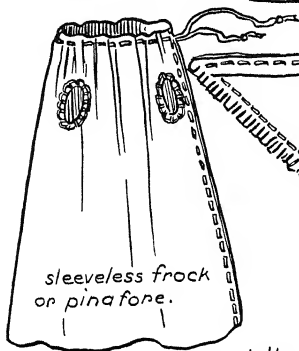
Plastic modelling.—There may be millboards and clay so that the children can model freely. Where plastcine is used, the amount available for each child is generally far too small; with white or brown potter's clay, there is less restriction as to the amount, but care must be taken to see that the child's clothes are well protected, and that it is possible for him to work freely and happily without being unduly cautious as to the condition of the floor or his own person. In this work, response varies greatly, the group may be small one day, larger another, there may be individuals who know at once what they want to make, others who just pummel and roll, and some who feebly poke and touch. The teacher watches, she asks what is being made, she shows interest, she delays requesting that anything definite shall be made, though she may sit down beside the feeble folk and quietly make, talking as she does so, the nest of eggs we heard about, the buns that Simple Simon bought, or the basket that the Old Woman took to market. Soon somebody catches the idea, suggests alternatives, and in an attempt to imitate, may produce something of his own, new and different. In this way



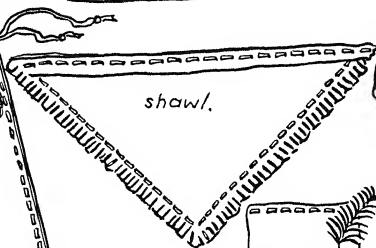
trousers.



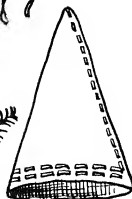
skirt or apron



sleeveless frock
or pinafore.



shawl.



bonnets and hats.

dolls clothes.



rag babies.

dressed rag babies.

the good work has begun, some response has been evoked

Paper tearing and cutting.—Snipping or tearing are in themselves attractive to some of our little ones, reasonably small pillows for afternoon rest may be filled as a co-operative effort, leaves, snow, or confetti for some little dramatic effort may be made, even the preparation of paper for paper-pulp to be used by this or another class for modelling purposes, can fitly be done in one of these quiet periods.

Paper work after this merely chopping and cutting stage may become a little more advanced. Flowers, leaves and "pretties" are cut from wall paper and used either to paste on the cover of a book, work box, or some other treasured possession, or are merely wrapped in a paper to be taken home to show mother. Fashion books having pages with figures that may be coloured and cut out, are a source of great joy, either for scrap books or for frieze-making purposes, though at first the child may not wish to put the fruit of his efforts to these uses, to him the colouring and cutting are of first importance.

PLATES IV. AND V. PAPER TEARING AND CUTTING—SIMPLE SHAPES.—In free-cutting, circles and simple leaf shapes are usually the earliest attempted, first accidentally, then deliberately. Next, accidentally, appear star forms, trees, flying birds and butterflies, even houses, tents, trains, people and animals, the resulting shape in most cases suggesting the name. Soon we find our small workers announcing that they intend to cut a particular thing. From that point the forms of the shapes improve rapidly, due to the increased control over the scissors given by practice, and the stimulus of timely encouragement and suggestions

Drawing and colouring.—Drawing and painting, too, ought to enter into the choice of occupations—sometimes singly, sometimes together,—for they are just as much

a part of handwork, as those more general and perhaps more social activities that occupy children of this age at other times of their day

Some groups or individuals may draw freely on low wall blackboards (with which every school ought to be equipped), or failing those, upon large easel boards put down against the wall for their convenience. Coloured, as well as white chalks, ought to be provided, and a full-sized length of chalk affords more scope than a short, stubby piece. Small individual blackboards appeal to some of our artists, but here again the size is generally far too small. A board about the size of an ordinary drawing board, and of sufficiently light weight to be moved, used at the table, or better still, on the floor, is valuable for either free drawing or writing purposes. For children of this age, opportunities to draw with pencil are far too few, big thick pencils, if possible of the carpenter's type, are best, or the thick red or blue crayon that is used for marking purposes in higher classes. Assorted chalks are required, these must be of adequate length and thickness, as we want no restriction in big, bold, free work. Surfaces to draw upon are liable to be restricted, chiefly for reasons of economy, but with the exercise of a little ingenuity, that difficulty can be overcome to a large extent. Kitchen paper or grocer's grey packing paper is very cheap; pieces cut to about foolscap size can be kept ready for the children's use. The cheaper quality of typewriting paper is good too, but perhaps more expensive. These "bought" papers can be set apart for special efforts and occasions, at other times the children can and will draw delightedly upon the backs of gay handbills, posters, wall paper, uncreased pieces of packing paper, opened sugar bags or used envelopes of the larger sizes, in fact, these are frequently regarded as far superior to the ordinary white paper, and are chosen in preference. These papers are cut fairly large in size, and are fixed with paper clips to the sloping millboard,

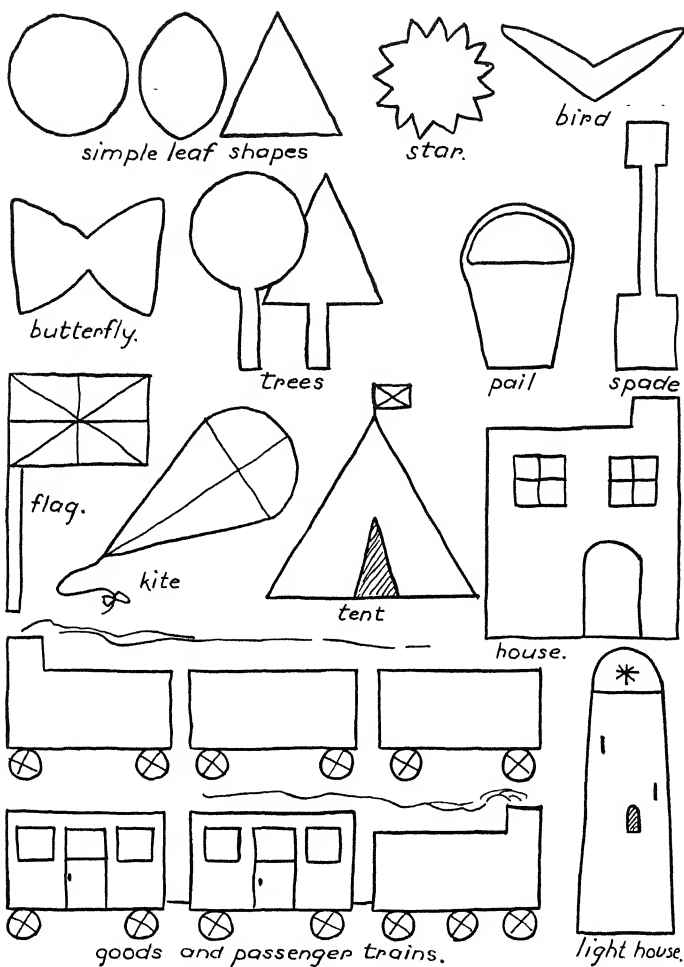


PLATE IV PAPER TEARING AND CUTTING—SIMPLE SHAPES

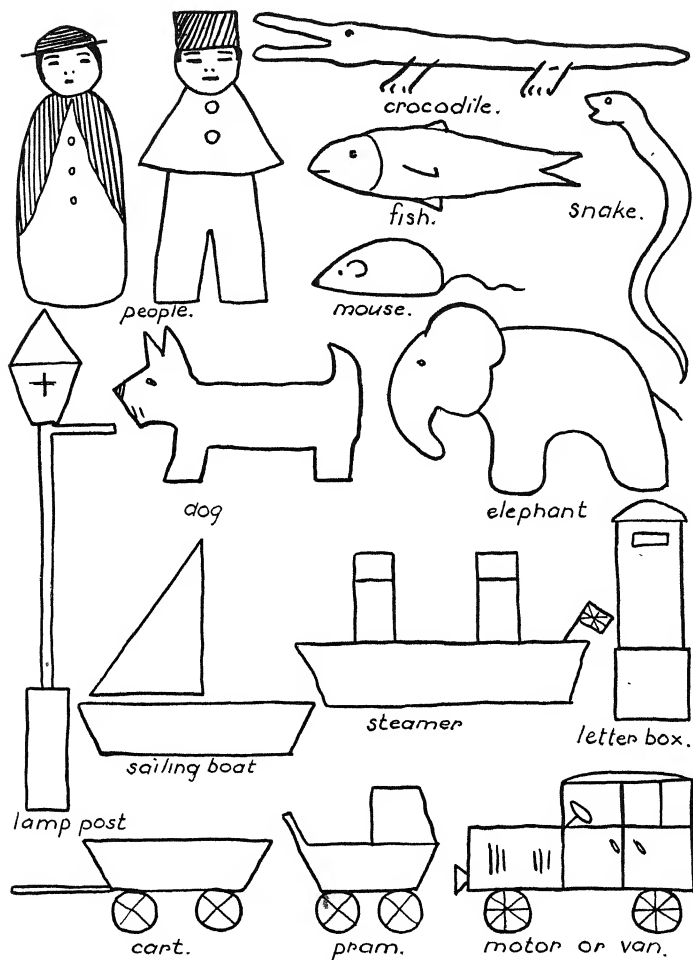


PLATE V PAPER TEARING AND CUTTING—SIMPLE SHAPES

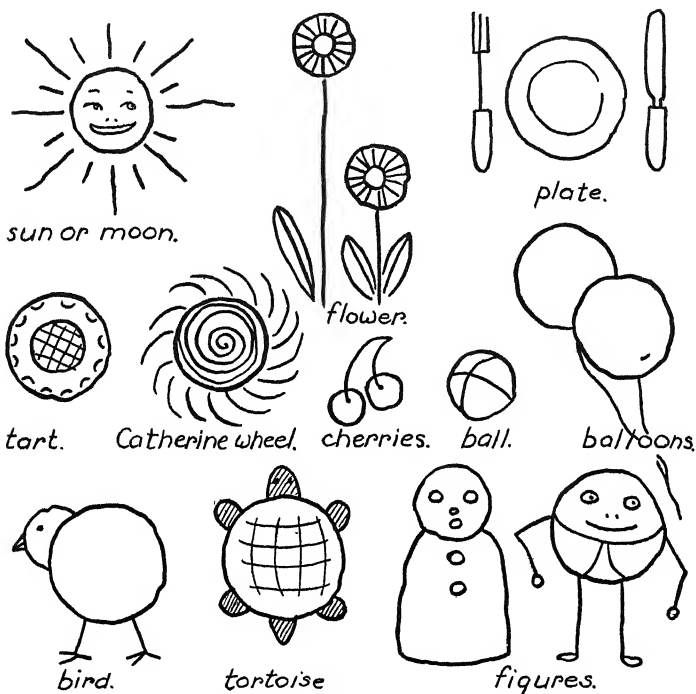


PLATE VI PAPER CUTTING—CIRCULAR SHAPES

or used flat upon the floor, and the children will draw upon them, sometimes with, but more frequently without suggestions. They may contentedly draw with pencil only, sometimes they may decide to crayon or colour their pictures, sometimes to paint, progressive individuals may demand scissors and proceed to cut out and use their own creations, as hitherto they may have used only the ready-made *motifs* provided by the gay wall paper or fashion book.

PLATE VI PAPER CUTTING—CIRCULAR SHAPES—The simple circular shape, with the addition of colour and markings, becomes the shining sun, smiling moon, a plate or mat, jam tart, firework, balloon, etc., or part of an animal or funny goblin man, as shown in the illustration.

PLATE VII PAPER CUTTING—LEAF SHAPES—Leaf forms offer a variety of shapes, they may vary in size and colour,

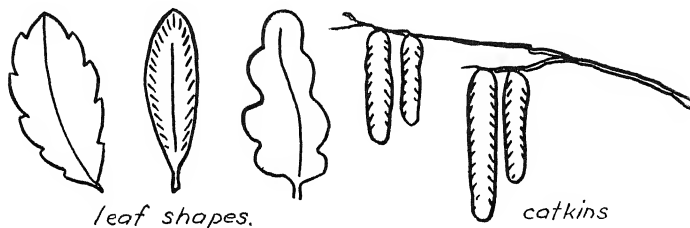


PLATE VII PAPER CUTTING—LEAF SHAPES

have wavy, notched or fringed edges, they may be solitary or grouped on a twig. Bunches of catkins, acorns, chestnuts, etc., offer further opportunities for free-cutting.

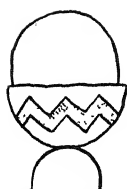
PLATE VIII PAPER-CUTTING—CIRCLE-CUT SHAPES.—The circle-cut provides a basis for many forms,—an egg and cup, bowl, toadstool, umbrella, tunnel, etc., as shown in the illustration.

Woodwork.—Of tasks other than the usual school ones, we have said little, but hammering nails is a task greatly enjoyed by children of four to five years old. Materials can easily be provided to occupy one or two individuals at a time, especially if the school has a balcony, or if the playground is easily supervised from the classroom. Odd lengths of wood, fairly solid and smooth, can generally be had for the asking, nails are cheap, and so too, are light-weight hammers or wooden mallets. Lighter pieces of wood, such as may be prepared from orange boxes, grape or banana crates, appeal to the constructive impulses of some of our small boys, and provided with a hammer and nails, they will sometimes show themselves most ingenious in their crude yet satisfying models of things like signals, aeroplanes, hatchets, swords, etc.

All these occupations present variety in tools and materials, they should afford choice not only as to task, but also as to material, time and means, and if their use is fully understood by the teacher and the children, they may easily be the happiest, soundest and most profitable of all our handwork periods.

2 HANDWORK PERIOD DEVOTED TO THE EXPRESSION OF IDEAS AND MAKING OF RECORDS

We pass now to the second type of handwork period, in which a child is required to use his developing powers in connection with the expression of ideas presented in other lessons, such as story, poetry and music, or to make some little record of thoughts or activities belonging to the nature and scripture periods. In this type of work there is probably less choice of material and form of expression; but there ought always to be scope for individual finish and contribution, and as much freedom as possible over questions of colour and placing, etc. Lastly, but not least important, there should always be something extra for the quick children to do, either some additional feature to be given to the work or material to make a repeat performance, and occasionally the opportunity to go and help a weaker, slower member. It is difficult, but very important, that we should at all costs avoid making our handwork periods occasions of flurry, anxiety or disappointment, and it is in



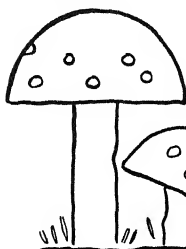
egg & cup



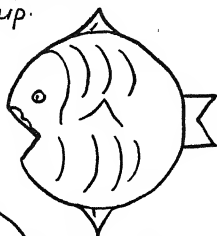
cup.



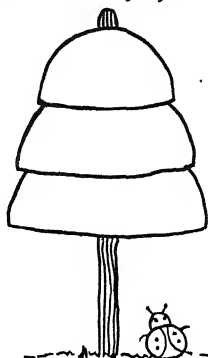
bowls for Beans 1, 2, 3.



toad stools.



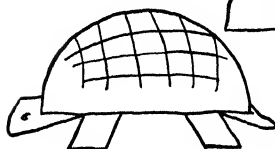
a funny fish.



umbrella tree.



tunnel.



tortoise.



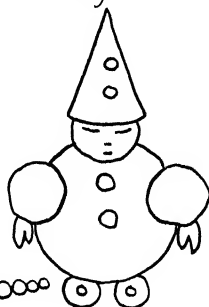
bridge.



umbrella.



dragon.



clown.

PLATE VIII. PAPER CUTTING—CIRCLE-CUT SHAPES

connection with this more directed work that they tend to become such

Paper pictures.—Paper cut pictures, either by an individual or occasionally of a bigger co-operative nature, are good. For example, in connection with story ideas, individual pictures might well be made of Black Sambo, his various friends and belongings cut out and arranged on a page, below which the teacher may write what the picture maker bids that she shall write, or the free child may in "drawing" writing, inscribe what his picture "says."

Cumulative stories like that of *The Little Red Hen*, *The Bun*, or *The Little House from Russian Animal Tales*, may require records that are progressive, which tell the story in its right sequence, for these the pages may be folded bookwise or in zig-zag folder form, then on these pages the various characters and essentials may be pasted, and other details added with pencil and crayon (of the non-smear variety). Larger sheets of co-operative effort for the classroom wall, may record experiences such as those of the *Little Coal Truck*, the adventures of *Peter Rabbit*, *Pigling Bland*, the customers of *Mrs Tiggywinkle*, indeed, all of those delightful friends of Beatrix Potter origin.

There is often argument as to how far this expressive work in paper shall be free or controlled. Shall the children draw first, and cut secondly, or shall we try to train them to cut freely from the very start? The answer to this lies very largely in the manipulative power displayed by our children, some find it very difficult to cut freely even after training, others do so happily and naturally from the start, also, too, a great deal of the success of the work depends upon the teacher's capacity in this direction, and the suitability of the illustrations used in connection with the presentation of the story ideas. Children need working models, save in the very early stages, they can never satisfactorily express ideas in drawing or cutting, either

to themselves or to others, unless the ideas are made clear to them. Good, bold, simple and colourful pictures used and kept at eye level on the classroom wall, are essential, a teacher who simply and naturally uses her blackboard, and can make that hedgehog, or that bad rabbit at request, is the one who will find a class taking over gradually something of her own expressive power. In the same way, stimulus must be given in connection with the actual free cutting of any of these story folk. Before making a picture the workers decide very simply among themselves, with suggestions from the teacher, what and whom the picture is to show. Then possibly all the workers try to cut out the figures, using waste paper, some efforts are successful, others less so. At this stage the teacher may elect to produce her own cut-out figure. How did she do it? The children watch her and are then ready to try again, sometimes with little, and at other times with considerable improvement in result.

The many opportunities for free drawing, even the drawing of round animal and object templates, the cutting of ready-drawn objects and figures, which occur in the periods devoted to varied and less directed tasks, prove their worth on these occasions, not only in the better control of the scissors, but also in that they have helped to clarify and define ideas. At certain times, it is legitimate to let our children share the fun of being able to cut the simple schematic cat, rabbit, mouse, hen, horse, chair, table, man and woman. But when the work is largely imitative, care must be taken to see that there is some scope for individuality, e.g., in a picture of the *Bear's Kitchen*, if one simple schematic bear is practised, the child has two other sizes to make independently, or he must choose from all the bears he produces three of the required variation in size. In the same way with the beds, chairs and bowls of the *Three Bears*, there is guidance, and yet as much freedom as the child is able to use.

There is no doubt that the Fives cut more freely and far more expressively than older children, probably for the simple reason that we teachers do not ensure in the case of the latter, that their skill keeps pace with their developing critical faculty

PLATE IX PAPER PICTURES *Our Snowman*—The first picture shown is a snow scene, of which the teacher contributes the main cut-outs. The snowflakes and snowballs are added by the children, though some may achieve snowmen, brooms, trees and wintry suns of their own

Autumn Magic—In the second picture the landscape is provided by the teacher, while the children add the leaves, which may be torn or cut and gaily coloured

The Bright Blue Sea—In the third picture shown in the illustration the teacher supplies the seascape. Steamers and boats may be contributed by expert workers, while the others may add pebbles, clouds, rocks, sand pies and castles, etc.

Our Bonfire—This is a simple yet effective picture. The children supply leaves, torn or cut and brightly coloured, while the teacher finally adds flames and smoke

Springtime—This picture, at the bottom of the plate, should be crowded with cut-outs expressing all the life and colour of spring—leaves, blossoms, birds, bunnies, and butterflies, of all sizes and colours

Twinkle, Twinkle, Little Star—The last picture on the plate is made up by the teacher, the children supplying the moon and stars

PLATE X. PAPER PICTURE—TOYTOWN.—This picture illustrates a street, "Toytown," or "Where the Shops Are." The teacher supplies the background to the picture, and the detail depends entirely upon the experience and capacity of the

children. The figures and vehicles may be drawn and cut out, or cut from fashion books, advertisements and catalogues, or freely torn or cut. Blossoming trees, gay gardens and parks may be furnished with the blooms cut from a seed catalogue

Record pictures.—Ideas from nursery rhymes and poetry can be expressed in pictures in the same way as the story records already described. In connection with nature work, sometimes the ideas related to a whole experience may need to be represented, e.g., a field of buttercups and daisies, trees, birds and butterflies, or a visit to the sea shore. In these cases the method may sometimes be free cutting, at others the teacher may provide the special representative background; e.g., the meadow, and a sunny sky. Sheep and lambs are difficult, particularly as we need to represent the idea of frisky movement, and therefore it would seem legitimate and wise to provide a little more assistance for individual cutting, in the shape of simple outline forms of sheep and lambs in varying postures. These shapes must first be carefully cut out, then used as templates for the production of as many other sheep and lambs as time allows. Such a picture holds a good deal of the teacher's work, but it occasions much and very careful "business" on the part of most of the child workers, it can, too, afford scope for those quicker and more intelligent members of the class, who can provide all the other features incidental to the scene,—the shepherd, some of the watching children, the trees, the birds, flowers and perhaps even a peeping rabbit or two

Plastic modelling.—Work with some of the different types of modelling materials, or with natural grey or red clay, is an alternative and very valuable means of expressing ideas. Plastic material is perhaps the most valuable means of expression for our youngest children, for not only does it make great appeal, but children seem to understand it

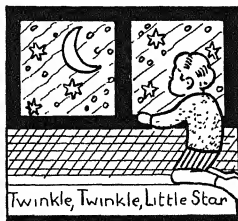
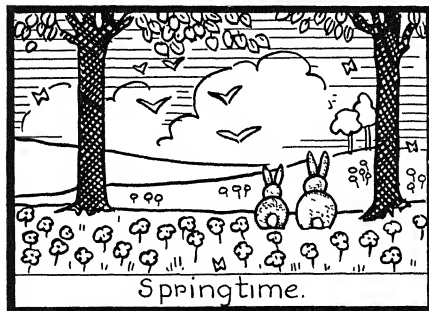
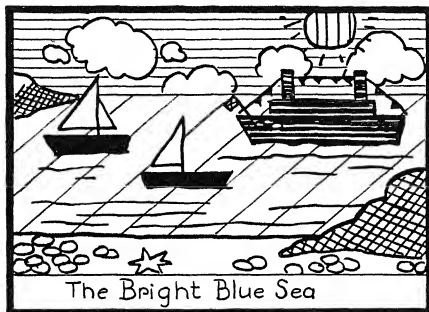
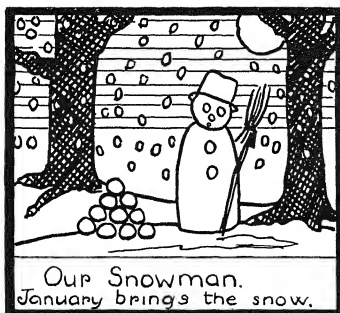




PLATE X PAPER PICTURE—TOYTOWN

more readily than other materials. But here, too, there must be some help towards a fuller and better achievement, otherwise children respond less and less to the challenge of this material and others.

Free use of plastic material in the first handwork period has shown its possibilities, considerable manipulative power may have been gained as a result of self-chosen activity with it, but now the question is, how to make it serve special needs. Those blind mice, hungry rats, or venturesome ducklings, even hot cross buns and Christmas pies, suffice at first and give every satisfaction to their makers. But they may and ought to be compared with a bigger, better object that either someone else in the class or the teacher has made, so that the desire to make a more realistic model begins gradually to dawn. Upon subsequent occasions certain models may be repeated, and made the vehicle for a little training in skill; for example, it is fun to make a really round ball, to change it by thumb and finger pressure into a nest, a bowl, a flat platter, a cup and saucer, and so on; or better still, to build up from it the rabbit, chicken, duckling, or other creature that may be required. At other times, in the interest of a more effective performance, after having made a first attempt themselves, they will very willingly gather round to see how

legs may be made firm and steady, to notice that it is the equal size of the four wheels that makes the little truck stand level; and so through direct imitation, having felt a need for further skill, they go away to make their satisfaction more complete. For the most part, clay modelling for the Fives is a matter of self-expression, but as we have seen, children can be helped to view their work more and more objectively, and to be interested in skill and in some of the little devices that make for a development of power.

3. HANDWORK PERIODS TO SUPPLY INDIVIDUAL OR CLASSROOM NEEDS.

We come to the third type of handwork, in which children's constructive powers are to be used in supplying their own or classroom needs, for work and play purposes. The materials ought to be as varied as possible, and the occasions as real and as purposive as we can make them, this is our great and earliest opportunity to show that handwork is useful, for it helps to make things that we need and use in various directions.

Mat making.—What, we may ask, is sufficiently easy to be fit for use, when

made by these eager, over-hasty, unskilled workers? We begin, perforce, with something very easy,—a supply of gay wall paper mats for our lunch or nature table. The mats may be made “pretty” with leaves and flowers cut from another source, or they may have edges fringed and scalloped. At first an exercise of this character may be directed by the teacher, as soon as the children have seen some mats to arouse their desire to make, but as a supply is always necessary, mat making can soon become an independent activity for individuals or groups of children in the free handwork periods of which we first spoke. New types, gradually requiring a little more skill, might be provided for the children to use as working models, for though it is excellent for children to repeat at any stage that which they can do, a little variation and development suggested by another type are often a great stimulus to creative thought and effort.

PLATE XI. PAPER MATS.—Five varieties of mats are shown in the illustration, these can be used on the nature table or as luncheon mats. At first the shapes are drawn by the teacher and cut out by the children. If time and skill permit, the first shape may be used as a template for drawing and cutting out other mats. The decorations may be geometrical forms or free-cutting shapes cut from paper of a contrasting colour, or “pretties” cut from a wall paper or seed catalogue. Fringed or jagged edges give an additional decoration and training, though the latter are difficult to make.

PLATE XII. PAPER MOTIFS.—The children should be encouraged to use their own *motifs* rather than ready-made ones. These can be used for decorating paper table cloths of kitchen paper, or larger table mats, as well as the individual place mats. The illustration shows a variety of simple *motifs* suitable for festive occasions.

Record books.—We have spoken of drawing, cutting and writing records in connection with story, music, nature and scripture lessons. A place where each of these can be kept is quite within the power of small folk to provide. Different types of record books can be made from time to time as the children's power develops, and none should be made so large that it lasts for too long a time. The following are some types which can be made.

A book with a single front cover of stronger paper made “pretty” with some or all of the devices that its maker can command. It has a name label, which at first it will be necessary to provide, and which must be pasted somewhere on the cover. Behind the cover are clipped the pages of kitchen paper that are to carry the records. These papers can be twice the size that the pages are required to be, and must then be folded in two, and cut carefully down the fold,—a wonderful exercise in manipulation, and also in experience of mathematical truths.

Upon another occasion, a loose back as well as a front cover can be provided for the record book, and this time the covers can be strengthened by means of folded hems at top and bottom, thus combining folding and pasting in construction. In giving this task, one must be prepared for the very great difficulty that many children will find in making the hems on the second cover match those on the first, even relatively. It is helpful after one cover has been prepared, to lay it down over the other cover paper, and turn up the new hems over the old, the top cover is then removed, and the hems on the second cover are pasted down in the same way. The finishing of the book is along the same lines as in the case of the earlier simpler cover, though perhaps more scope is allowed for the individuality of the worker. This is a good exercise, as it allows for a repetition of processes, also it demands that in supplying some individual decorative finish, the small worker may draw upon his own ideas and skill.

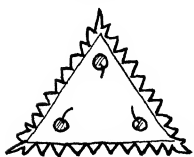
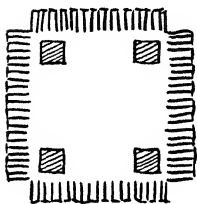
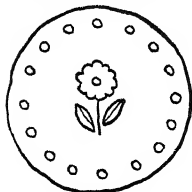
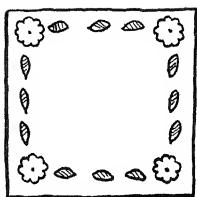


PLATE XI PAPER MATS

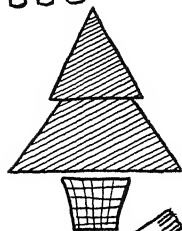


PLATE XII PAPER MOTIFS

Another type of cover is made from one large sheet of wall paper, folded down the middle to make the book firm. If hems are desired, both the front edges can be turned in and pasted down. The pages for this book are folded down the middle, and sometimes tied or stitched, with a thick cotton or wool strand, after pricking or punching through the several sheets.

Sometimes, loose sheets of pictures or writings can be kept in simple folders or packets that can be made either entirely on folding lines with a little cutting, or sometimes, with more able children, with pasting over of flaps and edges.

PLATE XIII. RECORD BOOKS—

Attractive record books may be made of paper, and ornamented with paper cut-outs. Fig 1 shows a book made with a single front cover. The pages are attached behind the cover with paper clips.

Fig 2 shows a book with single back and front covers, these are strengthened at the sides by hems folded on the inside and pasted down as illustrated in Fig 2A. The covers and pages are held together by large paper clips. If, however, the books are to go to the child's home, the covers and pages may be pierced and tied with thin string, as paper clips are an expensive commodity.

Fig 3 shows a book with a folded cover. Hems are folded down at the sides, as shown in Fig. 3A. Fig 3B shows two methods of folding the paper leaves. The pages and covers are pierced at the fold and tied on the outside.

PLATE XIV PAPER FOLDER AND PACKET—Fig 1 shows a simple paper folder decorated with paper cut-outs. The plan for making the folder is given in Fig 1A. A wide margin is folded down on all sides and the corner squares are cut away. The back of the folder is shown in Fig 1B.

Fig. 2 shows a paper packet which may be used for collecting pictures. The plan

of the packet is the same as for the folder, only the margins are made as wide as the face of the packet. The side flaps are folded in half once, as shown in Fig. 2A, then pasted down to the inside cover of the packet. The face of the packet may be decorated with coloured cut-outs.

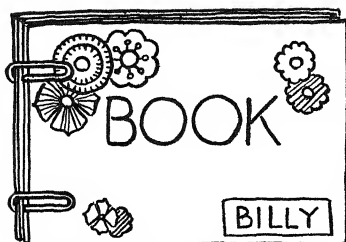
4. HANDWORK PERIOD TO SUPPLY PLAYTHINGS

Simple play properties.—In connection with imaginative play, story dramatisation, festivals or performances, simple costumes and properties are frequently required. For these, newspaper is an excellent medium. Hats, caps, bags, torches, wands, flags, necklaces, etc., can all be provided with joy and profit, and proudly worn when the great moment comes. The method of making most of these articles is by simple folding and cutting, and sometimes by rolling and pasting.

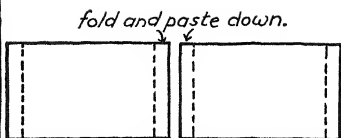
We can make crowns, sceptres or wands for kings, queens or fairies, which we need to play our tiptoe game of *Kings and Queens*, or to sing altogether about the *Four and Twenty Blackbirds*. Cocked hats and paper whips are needed for *Yankee Doodle* and *Soldier Boy*, though in the case of the latter the whip becomes a flag. Other nursery rhymes and stories demand such things as sunbonnets and aprons, bakers' hats, and so on.

PLATE XV PAPER HEADRESSES AND PROPERTIES—

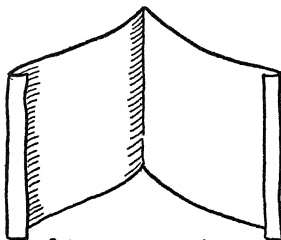
The crowns for the royal family shown on the plate are made from coloured paper and are decorated with paper cut-outs. They are measured round the child's head and pasted up at the back. The fairy wreath is made of wall-paper flowers pasted to a paper band. The cocked hat is made in the usual manner, with the addition of fringed paper streamers pasted on. The party cap is made like a paper bag and decorated as gaily as possible. Wall paper or newspaper serves admirably



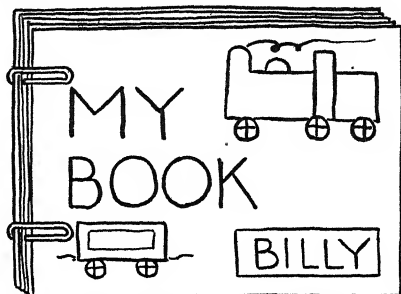
1. BOOK WITH SINGLE FRONT COVER. ~~~



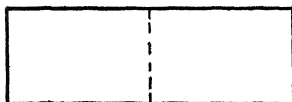
2A. two single covers with hems.



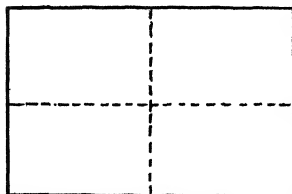
3A. folded cover with hems.



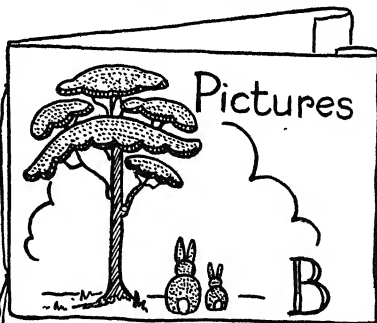
2. BOOK WITH SINGLE BACK AND FRONT COVERS ~~~



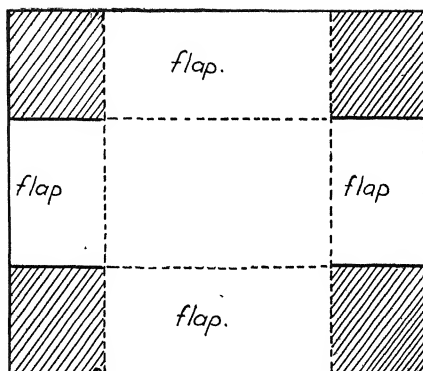
or



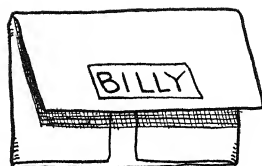
3B. how to fold pages.



3. BOOK WITH FOLDED COVER AND PAGES ~~~



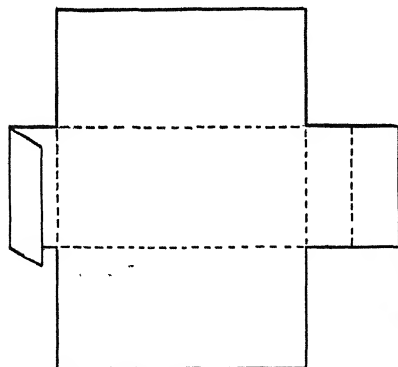
cutaway 1A. plan of folder.



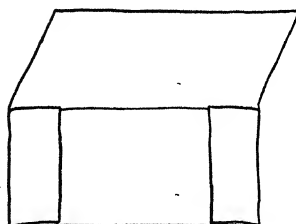
1B. back of folder



1. PAPER FOLDER..



2A. plan of packet.



2. PAPER PACKET - OPEN.

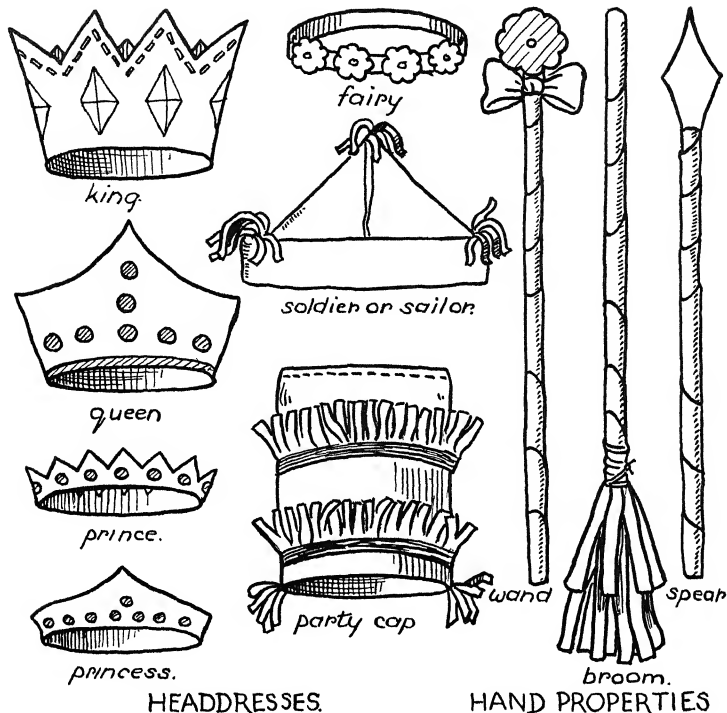


PLATE XV PAPER HEADDRESSES AND PROPERTIES

for the foundation, and an endless variety of caps can be made

The wand, broom and spear shown on the plate are examples of the many kinds of hand properties which may be required. Whips, sceptres, torches, flags, etc., can all be made in the same way. The stick is a paper roll and the decoration is made of coloured papers.

PLATE XVI. PAPER COSTUMES. *Set of bonnet, apron and bag.*—Fig 1 shows a bonnet, apron and bag made of coloured paper decorated with cut-outs. The bonnet is made like a bag, with strings and border pasted on. The apron is a shaped piece of paper pasted to a long strip for the strings. Fig 1A shows how to make the bag from an oblong of paper. The oblong is folded

in half and the top free corners are folded down, as shown. The front folded flaps are cut off, while the back flaps are pasted on the inside and pressed over on the front part. The completed bag is shown in Fig. 1

Cook's outfit.—Fig. 2 shows a cook's outfit, consisting of an apron, cap and cuffs. The hat is a paper bag with a folded hem at the bottom. The top of the bag is pulled down to one side. The cuffs are strips of paper pasted up to form cylinders. The apron is a shaped piece of paper. The sides of the apron are folded over on the inside and pasted down to strengthen them. A length of wool is threaded through the hem at each corner to tie at the back. Alternatively, the apron may be pinned on. The apron, cap and cuffs are similarly decorated with cut-outs.

Red Indian dress.—The headdress is made from a long strip of paper folded in half, as shown in Fig. 3A. The folded strip is first cut to taper at the end, as shown. Then the width of the lower decorative band is marked or creased along the folded paper. Vertical cuts reaching to the band are made through the double paper, forming the feathers. The feathers are then cut to points and coloured at the tips. In wearing the headdress, it is pinned at the back of the head, and the ends fall down the back, as shown in Fig. 3C.

The Red Indian shirt is shown in Fig. 3B. This is made of brown paper, in the shape of a bib, and attached to the shoulder. It can be decorated with fringed strips of paper as simply or elaborately as the patience and ambition of the maker permit. A similar bib can be prepared for the back and the two may be worn with a paper belt, into which a hunting knife and tomahawk made of wood, cardboard or paper, can be stuck. Bead necklaces, fringed cuffs and leggings make the complete outfit as shown in Figs. 3C and 3D.

Doll's furniture.—As part of equipment for work and play, children of this age

can help to provide much of the furniture for the doll's house, or in the playhouse for a visiting doll, that has to be made ready and kept in order by the entire class. Chairs, tables, stools, pictures, cupboards for the doll's house can be constructed very simply, first from waste materials like cardboard, cotton reels, corks, blocks of wood and match boxes. Then, in a small way, furniture can be made from squares of wall paper folded into sixteen squares, but generally only a few of the more numble-fingered in the class are able to attempt anything so difficult as even the simplest construction on the sixteen-squares basis.

PLATE XVII. DOLL'S FURNITURE
Chair.—Fig. 1 shows a simpler method of making the chair already described on page 19. A 3 in.-square of paper is folded up to make the seat, as shown in Fig. 1A, and a separate strip of double paper is stuck on to make the back.

Match-box bed.—Fig. 2 shows a bed made from the tray and cover of a match box.

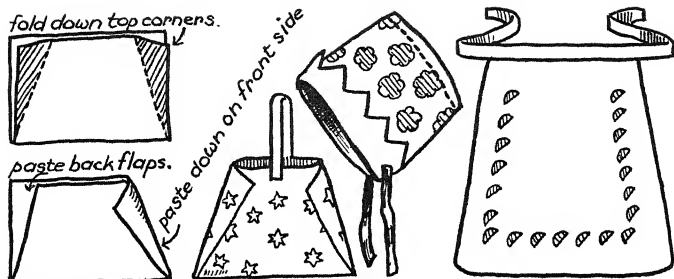
Table.—A very simple table is shown in Fig. 3. It consists of an oblong box lid pasted over two match-box covers standing on their sides.

Arm chair.—A small circular box lid and a cotton reel are required for this model. The lid is stuck over one end of the reel, Fig. 4A. A curved double paper pasted round the lid forms the back and arms, while a wall paper frill covers the base, Fig. 4B.

Pillow.—Fig. 5 shows a pillow made of twisted tissue paper.

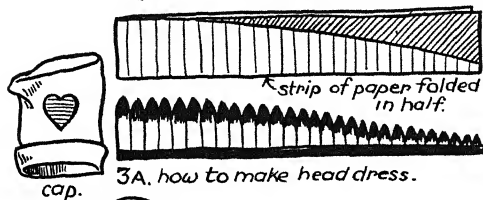
Box Bed.—Fig. 6 shows a bed made of a box with cardboard ends pasted on.

Cot.—Fig. 7 shows a cot made of a match-box tray with ends of cardboard or double paper.

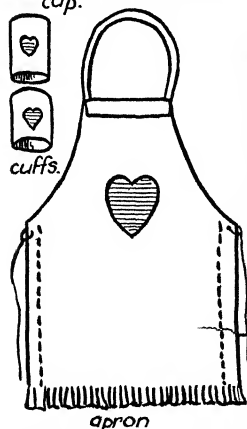


1A. how to make bag.

1. SET OF BONNET, APRON & BAG.



3A. how to make head dress.



2. COOK'S OUTFIT.



3B. Red Indian shirt.



3C.



3D.

3. RED INDIAN DRESS.

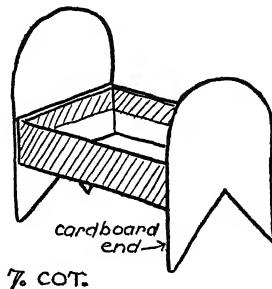
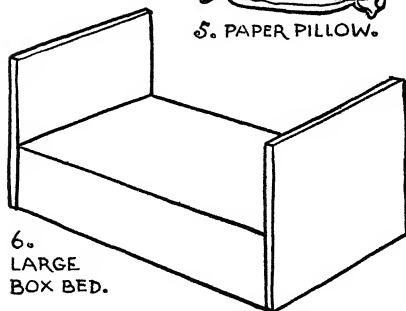
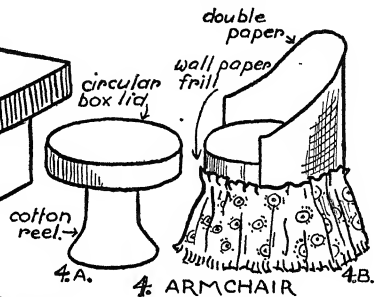
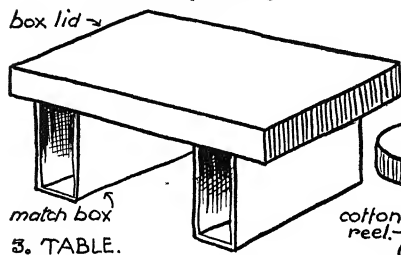
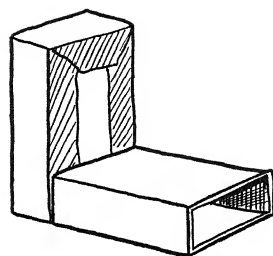
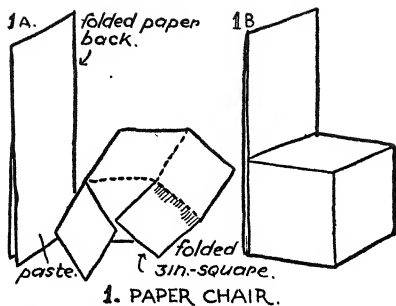


PLATE XVII DOLL'S FURNITURE

PLATE XVIII DOLL'S FURNITURE.
Perambulator—Fig 1 shows a match-box pram. The canopy and handles are made of paper pasted on. Each wheel is composed of two paper discs, *a* and *b*, as shown in Fig 1A. The top of disc *b* is folded back, and its lower part is pasted to *a*. The top halves of both *a* and *b* are then pasted on the inside and attached to the box so that they grip the angle between the bottom and the side, Fig. 1B. A tiny paper doll, Fig. 1C, is made to lie in the pram. A cushion made of double wall paper fringed at the sides, and stuffed with a little pad of cotton wool, is shown in Fig 1D.

Fireplace—Fig 2 shows a match-box fireplace. The background and hearth may be shiny wall paper, or drawing paper decorated by the child. Double paper flaps are pasted to the background to make the mantel shelf, canopy and fender.

Wireless set—A wireless set, as shown in Fig 3 is easily made from a match-box, decorated with paper cut-outs and furnished with a fine wire.

Grandfather clock—A grandfather clock, as shown in Fig 4, can be made from two match-boxes, or a toothpaste carton, standing on a match-box base. The face of the clock is drawn on paper and stuck on. To join two match boxes, paste the inside of each cover at one end, place the pasted ends adjoining, then slide a tray so that it sticks between the two.

Electric lamps—Two kinds of electric light fittings are shown in Fig 5. In each case the bulb is a bead suspended on a piece of thin string. The shade may be made of a circle of paper with a segment cut out and the cut edges pasted together, as shown in the left-hand sketch. A more elaborate shade is made from a light circular box lid with a fringe of fringed paper pasted round the edge on the inside. The shades are threaded on the string and held in place

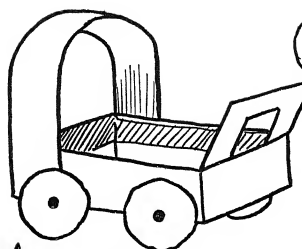
by a large knot, or a bead knotted on. The larger shade requires a cardboard disc threaded on first to keep it level. The lamps may be suspended by a paper disc pasted on the ceiling, or by a drawing pin.

Wall clock—Fig 6 shows a wall clock made from a match box. The face is drawn on paper and then stuck on. Two holes are pierced in the box and a length of wool is threaded through. A bead is hung on each end of the wool by a knot. The clock can be attached to a wall or shelf.

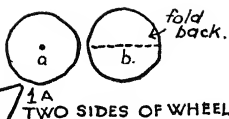
Plant pots—Fig 7 shows two types of plant pots. The plants are made of a roll of paper clipped at the end, or of paper flowers on a twig. The plants may be contained in a cotton reel or gay paper collar, as shown.

Equipment for a playhouse.—A playhouse large enough to be entered and played with, provides an excellent centre for creative and constructive effort both with children of this age and of the next stage. Two small clothes horses provide the necessary framework, a few extra slats make support for the roof, then the walls and roof can be given a solid covering of strong brown paper, or of sheets of cardboard crayoned and marked by busy helpers, to represent bricks and slates.

All the construction can be done in the classroom with active assistance from various members of the class in turn, while the others are occupied in making the gay border to form a frieze for the walls, or in framing pictures with bands of wall or brown paper. The furniture for such a house has to be strong and sizeable, the little school chairs and sometimes a table do quite well, but a wise teacher will provide a series of boxes to be used for seats, tables, or for whatever purpose the children decide in their play. Even these small children can help to make such boxes smooth with glass paper, and then perhaps, with floor



1. MATCH-BOX PRAM.



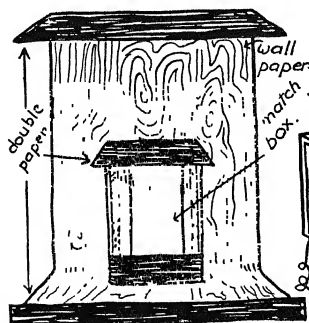
1.A TWO SIDES OF WHEEL.



1.B HOW TO ATTACH WHEEL.



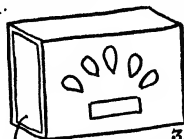
1.C WEE PAPER DOLL



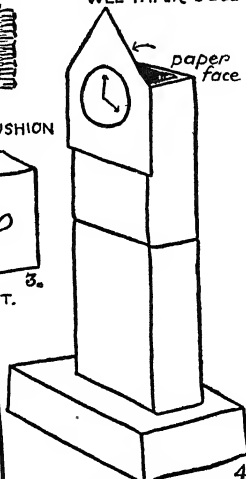
2. FIREPLACE



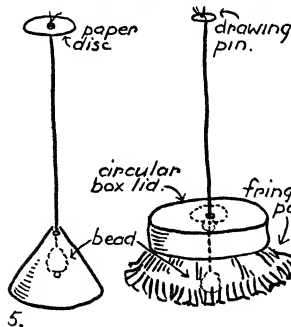
2.D WALL-PAPER CUSHION



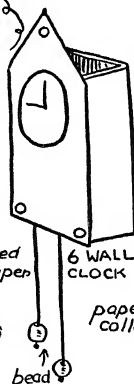
3. WIRELESS SET.



4. GRANDFATHER CLOCK

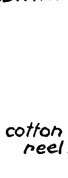


5.



6 WALL CLOCK

paper collar



7 PLANT POTS.

and persons well protected, to give them one or two coats of water stain.

Some teachers ingeniously construct from margarine and sugar boxes simple little stools, dressers, and beds for these play-houses, and perhaps with these smallest children the ready-made furnishing is the easiest plan to follow.

This house requires many further pieces of equipment, e.g., mats for the floor, table cloths and mats, dusters, cushions, bed-clothes, curtains, etc. Some of these may be made either from "real" materials, others devised from the gay papers of the wall-paper book. Then, as the play develops, more and more play properties are required for the users of the houses; e.g., hats for father and mother, aprons and caps for maids, even families of paper or rag, as well as food made of crumpled paper, clay or dough, for tea parties and other functions.

PLATE XIX. PLAYHOUSE DECORATION. *Wall friezes*—Figs. 1A, 1B and 1C show examples of wall friezes made from lengths of ribbon paper, decorated with cork printing, paper appliqué, or free drawings, respectively. The drawing may be made with pastel washed over with cold water to prevent smudging, or it may be made with water colour.

Pictures—Pictures from advertisements, postcards, or the children's own productions, may be framed with strips of paper as shown in Fig. 2. The frames may be left plain or decorated in some of the ways suggested above for the wall friezes. The picture may be strengthened with a backing of paper.

Wall clock.—An attractive wall clock, Fig. 3, can be made from a disc of white paper with a frame of twelve whole or half tops of milk bottles. The tops are pasted round the edge of the disc and calendar figures are pasted on the inside to correspond. Stiff paper pointers are attached

by a paper clip, or pasted on. The weights are two small fir cones attached behind by a length of string.

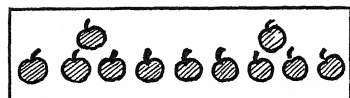
Festivals.—Occasions and festivals such as those of Easter, St. Valentine's Day, birthdays, May Day and Christmas, provide other opportunities for making letters, cards, and simple paper gifts, which can pass to other members of the class by way of the class letter box; bigger and more important things can be made to carry home as surprises.

Many of these occasions demand that the classroom shall be made rather a special place, and there is no reason why these small folk should not make the streamers, the bright covers for lights, the flags, bunting, wreaths, chains, as well as special pictures and friezes that help to provide the necessary atmosphere.

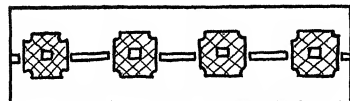
Of these special and more directed occupations some time may be given over to making things for the children's own satisfaction and amusement; e.g., woolly balls which are a great joy, and prove a very useful and soothing occupation. (It is more profitable from the child's point of view to make two small balls rather than one bigger one.) Sometimes simple baskets, shopping bags, flying birds and butterflies, fish, paper torches, windmills, kites, paper scarecrows, may be made; newspaper babies and their shoe-box beds always occasion great "busyness" and delight.

PLATE XX EASTER GREETING CARDS.—Fig. 1 shows Easter cards cut in an egg shape. These may be of single or double paper, closed or open. They can be gaily decorated with water colour, pastel, cork printing or paper appliqué. Figs. A and B show two methods of decoration. Fig. C shows an egg with a loop for hanging up, which may appeal to some children. Fig. D shows the reverse side or the inside of a card.

Fig. 2 shows a paper chick attached to a folded paper stand, which bears a name or a greeting.



1A. FRIEZE DECORATED WITH CORK PRINTS.

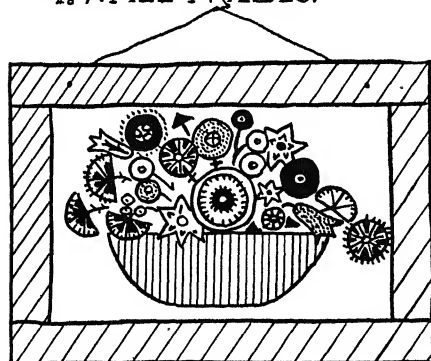


1B. FRIEZE DECORATED WITH PAPER APPLIQUES.

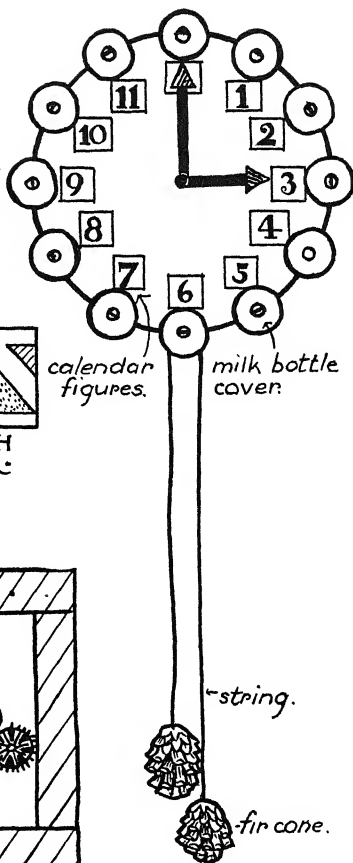


1C. FRIEZE DECORATED WITH PASTEL OR PAINT

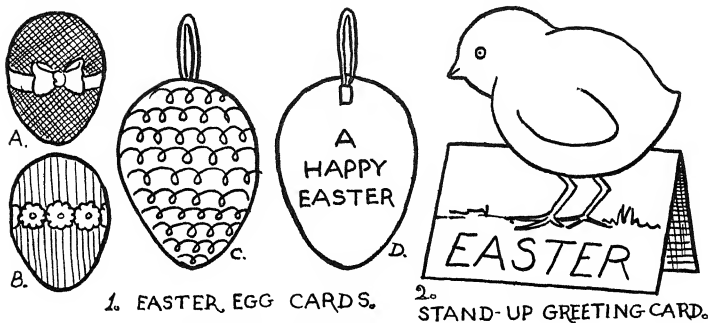
1. WALL FRIEZES.



2. PAPER PICTURE.



3. WALL CLOCK



3. EASTER MESSAGE.

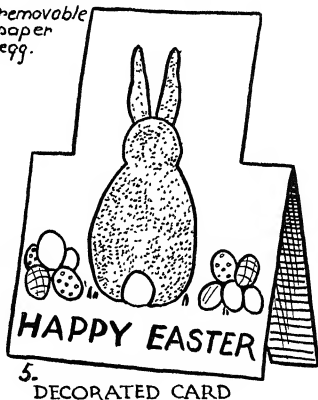
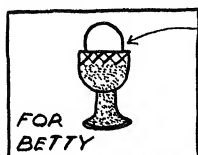


PLATE XX EASTER GREETING CARDS

Fig 3 is a card decorated with a paper eggcup which is pasted only at the base and sides. A paper egg bearing an Easter message slips in and out of the eggcup

Fig 4 shows a hen cut out of double paper. The hen is stuck to the base of a basket, box, or disc of cardboard and surrounded with gay paper shavings. The

model may carry a greeting or the gift of several sweetie Easter eggs

Fig 5 shows a more elaborately decorated Easter card

PLATE XXI VALENTINES This plate illustrates a few of the many varieties of simple Valentines. A Valentine for

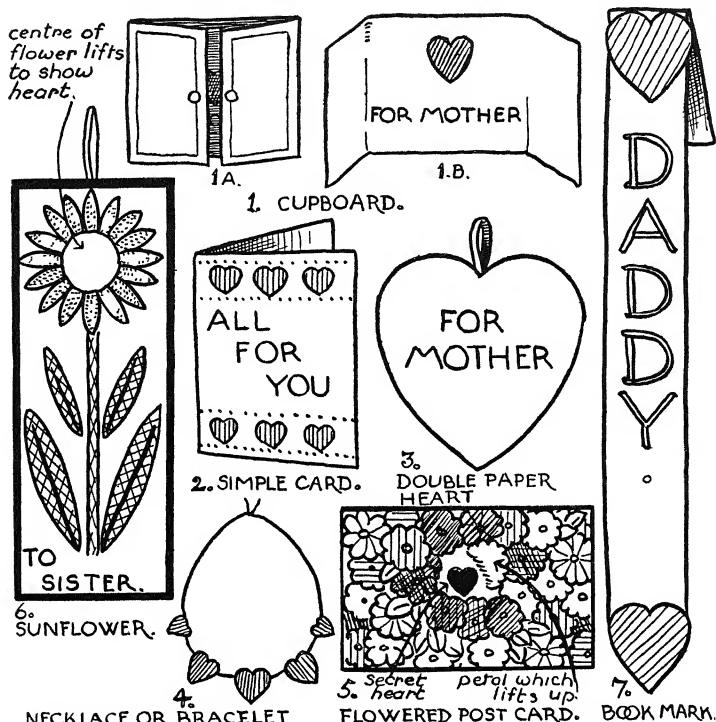


PLATE XXI VALENTINES

mother may be a cupboard, Fig 1A, which opens to disclose a heart, Fig 1B

The more ordinary type of decorated card is shown in Fig 2.

Fig 3 shows a heart cut out of double paper, which is pasted together enclosing a loop for hanging

A suitable Valentine to a child is a necklace or bracelet of coloured ribbon ornamented with double paper hearts, Fig 4

A fascinating Valentine can be made with a postcard covered with cut-out leaves or flowers. The cut-outs are pasted down and one is left loose round three sides so that it can be lifted to show a secret heart below, Fig 5

The same idea is differently carried out in Fig 6, which shows a cut-out sunflower, the large brown centre of which lifts up to show a heart

A bookmark, Fig 7, is a suitable Valentine for daddy

PLATE XXII. CHRISTMAS MOTIFS AND ENVELOPE—Fig. 1 shows various paper *motifs* suitable for use on Christmas cards, friezes, book covers, etc

Fig 2 shows two methods of using such *motifs*, one by hanging up with a loop, and another by pasting the foot to a folded card.

Fig 3 shows a method of making an envelope, suitable to young children. Take an oblong of paper, fold it in half, then fold down a margin on two free sides, as shown in Fig 3A. Cut away the folded margins on the front side of the paper, paste the back flaps, then press them down on the front side, Fig 3B. Fold down a margin on the third free side and cut away the front side, as before. Cut the corners of the remaining back flap diagonally, Fig 3C, and the envelope is complete. The front of the envelope may be decorated with a paper *motif*.

Method of work.—For all of these activities there must be space and time, children should help to prepare the room for their work, get and choose as far as possible their own materials, wipe up the spill on the floor, and tidy the room after the lesson. Where the work is directed, the children ought to see a specimen of the article which they are required to make. Young children are impatient to begin, they want always to set to work right away, and so they should, but they should first practise on a piece of odd paper, if they succeed, they are all the better able to use their better piece of paper. If they fail, they are more ready to think out the problem or to attend for a moment or two while teacher shows how she made her model. When they settle down to work again, some little ones need reassurance and support all the time, and it is the teacher's important task to see where help of this kind is needed and to guide such children to rely more and

more happily and cheerfully on their own efforts. Quick children must always be provided for, and material for second and even third attempts should always be at hand. The children should be warned about ten minutes before the end of the period, then work is looked at, explained by its makers, compared and contrasted with the original. This is the moment when a teacher shows that she knows and cares what every individual has done, that she appreciates effort, concentration, and individuality as much, or even more, than the most pleasing final result. This assessment of the work, slight though it must be with these immature workers, is very important and must rarely be omitted.

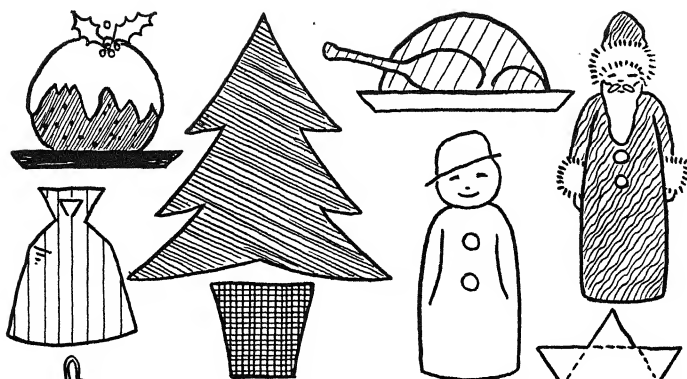
After that, clearing away begins, and even this, with time and effective organisation, can be made as much a matter of training and experience as the lesson itself.

PART II. FOR CHILDREN FROM FIVE PLUS TO SEVEN

Introduction.—Before planning the handwork for this stage, it is well to remind ourselves, that development in children is an individual matter and that it is slow and gradual, there is no marked difference between these children and those of the preceding stage, in fact, many could with profit have been detained longer in the initiatory class.

The children of this group, however, exhibit two characteristics; their interests gradually widen, with resultant increase of creative ambition, and there is some development of their critical faculty, though still it is important to remember that for some time yet their satisfaction is in the activity itself, *not* in the result.

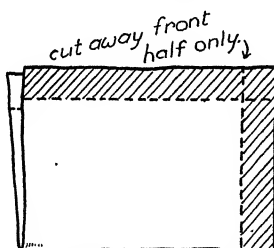
We still need the periods of different types of handwork, each with its own particular form of training and opportunity, each adding its tribute to the progressive development of the child.



1. XMAS MOTIFS.



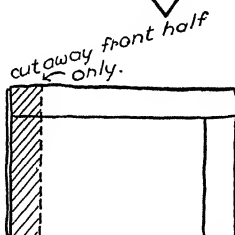
2. METHODS OF USING MOTIFS.



3A. fold margin on two free sides of double paper.



3C. mitre corners on third margin



3B. paste down back flaps & fold third margin.



3D. decorate with motif on right side

3. HOW TO MAKE AN ENVELOPE.

1. FREE HANDWORK PERIOD.

We place work of the varied occupation type first, for these children have still much to learn about materials and their possibilities. One, or at most two, of these periods per week would be sufficient, and as before, they are most conveniently arranged at the end of the week. The children can now be expected to contribute much more than before in the way of materials for these periods, we need, not only a greater variety of materials, but also a greater quantity, for our workers at this stage being more vigorous, their output is larger.

Classroom notices.—A notice board becomes part of the class environment, and from now onward, plays a great part in helping to train the children in responsibility, initiative and independence, particularly if it is used in connection with this or any other type of handwork lesson. We may remind our children that Friday is our free handwork day, and make appeals for wool, match boxes, cotton reels, etc. If the next day a clear, simple notice concerning these matters adorns our notice board, everyone is very curious about it. It is "read" by us all, a few moments deal with the whole matter, but we feel important, we now know what the notice says, we have begun to read for information, and we tend to remember those reminders and requests since the notice has been impressive.

PLATE XXIII. CLASSROOM NOTICES—The plate shows a number of notices which may be put up on the classroom notice board in connection with constructive work. The notices are printed by the teacher, in coloured pencil, they are carefully spaced and precisely worded, with the headings underlined.

Building with boxes and waste materials.—In the free handwork periods during the

<u>Handwork.</u>	
FOR <u>FRIDAY</u>	
please bring:—	
1. Corks	2
2. Match boxes	3.
3. Match stalks	6.
Thank you. E.B.	
<u>SOMETHING To Do.</u>	
1. Look at these <u>pictures</u>	
2. Look at the <u>models</u>	
3. Try to <u>make one</u> at home.	
4. Bring it to school on <u>Monday afternoon</u>	
<u>HELPERS.</u>	
<u>Paste-pots</u>	Billy
&	Jean
<u>Brushes</u>	_____
<u>Collectors.</u>	Sam
	Mary.

PLATE XXIII. CLASSROOM NOTICES

earlier stage, we noticed that some children displayed considerable ability and activity in connection with bricks and other building material. Now, it would perhaps be well to encourage building and constructing by using the boxes of all types and sizes that fill our waste material shelf, using the boxes first as building bricks, and then suggesting that with paste or a little dab of seccotine the results can be made more permanent.

As activity of this description may be slow and rather difficult to inaugurate, the teacher would perhaps be well advised to look carefully for evidence of interest in this type of work, to encourage the particular child to talk a little about his work, or explain it to one of the other children. The teacher may, on subsequent occasions, prepare a table where a small group can embark upon such a construction as that "Harry made last week." The teacher could sit down herself, and do some building with similar material, she might even request an order for a particular construction. In this way the idea is taken up, resulting in some extraordinary constructions, in which there seems to be much waste of material, and possibly few of the proudly labelled aeroplanes, motors and trams are recognisable as such.

Well-constructed or ingenious efforts are always noted, everyone has a chance to see and admire them, and soon the desire to imitate may stir in some of our more timid children. Sometimes, contributions from home begin to arrive, the aeroplane that went home yesterday may result in a better one to-morrow, the effect being that the whole group of workers desires to copy the main idea, though in detail the differences may be wide.

Spontaneous and candid criticism begins among the children themselves, there is search for just that precise piece of material, colour of paper, etc., that adds the requisite finishing touch. Gradually, other individuals become merged in the group, for if motor-cars are made, the next necessity is a

garage, and the teacher may ask someone outside the group to volunteer to convert a shoe box into a garage,—which, again, will probably need the label, that he shakily prepares, to complete it.

The important thing to remember about work of this description is, that once the children have really got hold of the idea, it becomes part of them, and given opportunity, help and encouragement, at the right moment, the work develops with the children's interests and ideas, in fact, it plays a great part in the development of both Constructions, materials and methods should be for the most part the children's own, though a suggestion may be given in the shape of a toy in the classroom, a model made by another child at home or at school, even occasionally the teacher's model.

The possibilities for such work may be to make better furniture and equipment for a doll's house, (the big, preferably sectional doll's house, constructed from boxes by the teacher and one or two volunteer assistants during this period), or the playhouse or home big enough to be used by class members. The playhouse may be from time to time a shop, a dairy, etc., so that the equipment varies accordingly.

Woodwork.—Carpentry is still a possibility, a tea chest will hold pieces of ply wood, strip wood, and small wooden boxes, such as chalk and sweet boxes. The tools are a few hammers with well-secured heads, perhaps a small safe saw or two, and many nails. Things to be made may be determined by classroom needs, or they may be matters of individual choice, this means that the children may decide that they require a milk cart for their dairy, a 'bus for transport, or a seat for the garden or house,—tasks that may occupy the energies of several children working in a group. Or they may still, and more frequently, desire to make articles of the toy description, the signal, aeroplane and engine, though occasionally more ambitious things like toy tables and chairs, etc., may be attempted (see page

550). It is important to set apart a place for this work,—a corner of the classroom, the corridor, playground or vacant room,—and generally it is advisable to keep the group small. A special low bench must be provided for hammering and sawing.

Sewing.—Sewing is even a greater joy than ever, and to dressmaking or constructing can be added the delights of millinery. There can now be, as well as a piece bag or box, a millinery box holding scraps of straw, braid, felt, fur, velvet, ribbon, feathers, leaves and flowers, and even one or two old felt or straw hats.

Possibly, after completely free and individual work on different kinds of gifts and garments for their own dolls, or for school dolls and Teddies, the children are ready for the suggestion of making their own dolls. A white or black rag baby is the first attempted. The teacher may produce a simple doll that she has made, and make another with the children. Such dolls need not be elaborate or difficult; the essentials are a head with a face, and a body of sorts. A square of material with a ball for a head, made of soft paper or pieces placed in the centre of the square and tied round with wool, is well within the power of many children.

Tying the knot securely is the chief difficulty, for it is extraordinary how long many children seem to rest in a state of dependence and incompetency with regard to knotting and tying, and it would seem that much more opportunity ought to be given for exercise in this particular direction. Such opportunities would occur naturally in this type of work. For example, the classroom doll has real clothes,—possibly a whole wardrobe of them—and may also have a supply of clean pinafores, all of which fasten up in the usual ways, and she should be prepared for her share in the day's work by having her clothes properly tied and fastened. Her bed clothes should be regularly washed, the pillow and bolster covers should be fastened with ties, also

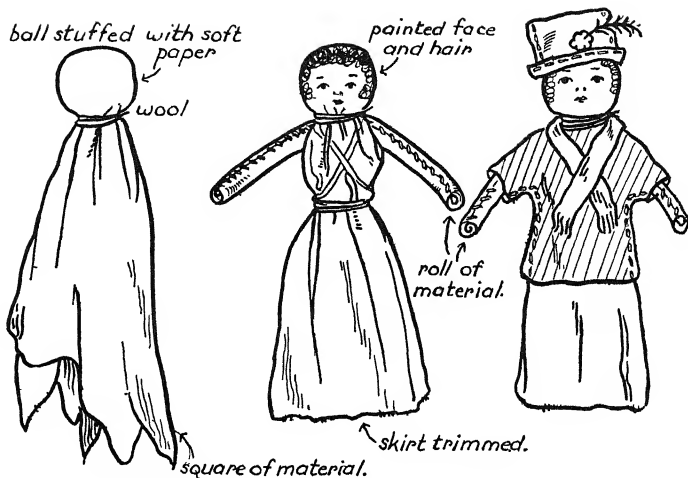
the mattress cover, and her self-appointed attendants must perform these tasks properly, even at the cost of a little practice at home.

A string box, which is seldom found in the classroom, could be very useful in this direction. String affords scope for knot-making, if not for bowing and tying, short lengths of string or string tangles can be sorted out, and knotted together to give the lengths necessary for shopkeeping activities, or to hold a festoon of lanterns or flying birds, etc., in decorating the classroom upon some occasion or other, even for a clothes line stout knotted string is not to be despised. Boys who make whips or kites need string, and they may decide to learn and practise their knots on a private piece of string, either before or after trying the original task.

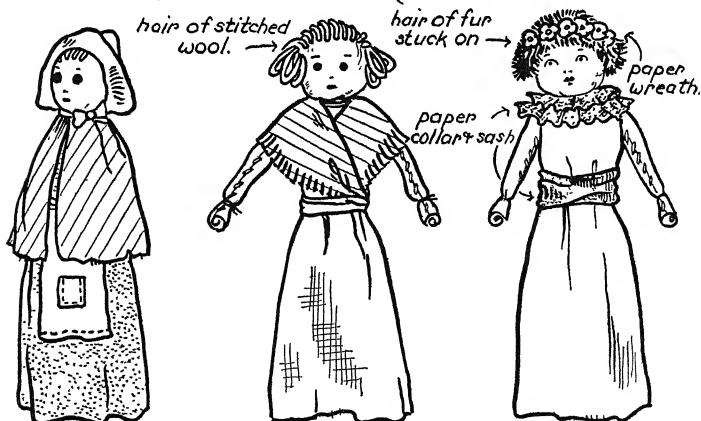
PLATE XXIV RAG DOLLS—The rag dolls shown on the plate are simply made from a square of material, with a ball in the middle for a head, made of soft paper or rags tied up with wool. The face and hair are added with crayon, ink or paint. Arms of folded and rolled material are tied on in one length, or separately. The clothes are made with tacking or large over-sewing stitches with raw edges on the outside.

The dolls may be dressed in various ways. A cape is a useful costume for an armless doll. Hair may be made of wool stitched on, or a piece of fur stuck on. Crêpe paper, as well as material, may be used to brighten the doll's clothes, as shown on the doll in the bottom right corner.

Dolls.—To return to the dolls, their faces may be added in crayon, ink or paint; hair may not be desired, or painted hair may suffice, but frequently, if fur or wool is available, some may be stuck or stitched into position. These dolls may be tied round the waist, the corners of the square forming the body and the skirts. They now need clothes,—perhaps aprons, shawls or capes, and they certainly require hats,



MAKING A SIMPLE RAG DOLL



DRESSES FOR RAG DOLLS.

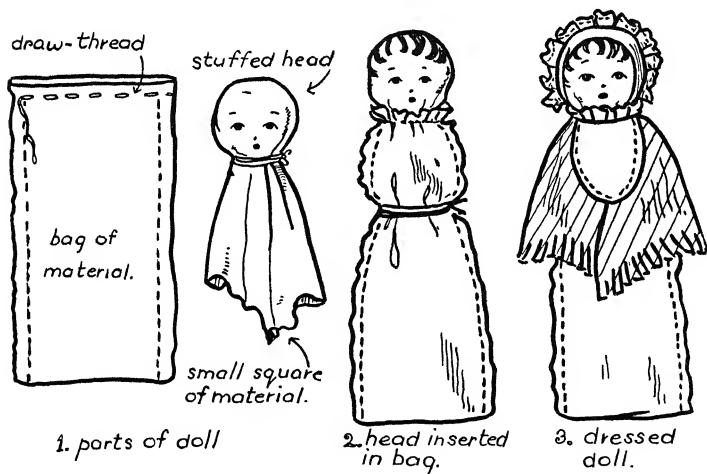
PLATE XXIV RAG DOLLS

caps or bonnets. Another type of doll that may be attempted by children in this or the next stage, consists of a head tied or sewn in a smaller square of material, the corners of which form the neck and slight body bulk, which is inserted in an oblong bag made ready to receive it. The bag is sewn up on three sides,—or on two, if the material is folded—and has a draw-string round the top. When the neck of the doll is inserted, the bag is drawn up tightly round it and secured by several winds and stitches in and around the neck. Such a doll may be a long-clothes baby or just an ordinary child doll, it may be finished precisely as was the earlier one, or its owner may demand that it shall have arms. These may be made in one length, or separately, of material folded and rolled and then stitched in position. Once arms are given,

the doll's garments begin to be more ambitious,—pinafores, coats and jumpers may be fashioned, generally on the magyar plan, secured with tacking or large over-sewing stitches, with, for the most part, all raw edges on the outside.

When a doll has been made and its needs in the way of clothes have been supplied, it may happen that a shoe-box cradle or bed, or a cart in which to pull the doll along, will be the next work begun. Playing with the doll might arouse this desire and result in an attempt to make such articles, or a teacher may suggest that such an article shall be made upon this or a subsequent occasion.

PLATE XXV. RAG DOLLS OF THE BAG TYPE.—The half plate shows a slightly more advanced method of making a doll



HOW TO MAKE BAG TYPE OF DOLL.

PLATE XXV RAG DOLLS OF THE BAG TYPE

An elongated bag is sewn up and left open at one narrow end, through which a draw-thread is run. A head is made separately of a small square of material with a ball of soft paper or rags tied up in the centre. The base of the head is inserted in the bag, the neck of the bag is pulled up, and the head is secured by tying and stitching. The face is drawn or painted, and the hair added with paint, or in wool or fur. A waist is made by tying up the bag with wool in the middle. Arms may be added as shown in the previous illustration and the doll may be dressed as before.

Shops and houses.—The “shop,” “dairy” or other temporary guise of the playhouse, will give rise to many types of doing and creating, e.g., mats, curtains and cushions may be sewn, a clock face with or without movable pointers will be required, scales of wood, tin or cardboard, might be free individual contributions, if only there is sufficient varied and provocative material to be used for these purposes. Clay and other modelling materials, such as dough, or rolled and crumpled newspaper, may be moulded, dried, distempered, coloured with dye or water colours, and will provide different articles of equipment, as well as goods for sale, such as tarts, cakes, pies and fish, cabbages, carrots, etc. As a rule, very realistic shops or stores can be equipped chiefly with “dummy” material, but there are always extras to be provided, for which match boxes, wall paper, etc., are required, indeed, our whole collection of varied material can be put to some use or other. Even when a shop is complete, the shoppers need purses, shopping or carrying bags, just as the shopkeeper too, needs his paper bags, posters, sale cards, etc., to be kept plentiful and fresh.

Free drawing and painting.—There needs to be still more opportunity for free drawing and painting, and cutting and mounting of pictures, but now more discrimination may be exercised. The teacher may offer

suggestions, such as making an illustration for a story, pictures for sale in the shop, posters or advertisements relating to some class interest or activity. From cut-outs self-drawn or ready-made, backgrounds for a group model might form a piece of co-operative work for a small group of workers, with a little advice and suggestion from the teacher.

Possibly, for children of this age, the whole afternoon would not be too long for this type of work, provided that there is space, with ample opportunity and material, and good underlying organisation. At the end of an afternoon so spent, the last half hour or twenty minutes should be devoted to a sensible and whole-hearted clearing-up of the afternoon's affairs, when each child should be helped and encouraged to play his part in leaving the classroom ready for the morrow, and as nearly “apple-pie” in order, as possible.

2. DIRECTED HANDWORK TO SUPPLY NEEDS IN RELATION TO OTHER LESSONS

In this type of work, it is possible and sometimes advisable to deal with the whole class, or with a large group of one half or one third of the class. Usually, directed handwork is more profitable if it is possible to limit the size of the group, and it ought not to be difficult to employ the remaining section upon some independent work, while the main group prepares its special task.

Record notebooks.—Special places for keeping records of stories, drawing, nature study, project or work centre activities are more necessary than at the earlier stage. As the children grow older, they are allowed more and more to have charge of their school belongings and materials. Lockers, work boxes or bags suspended from chair backs, are provided; so that activity in any direction should bring with it and include that most valuable of all training,—exercise in responsibility and independence.

Therefore, one does not hesitate to suggest that the children should equip themselves with attractive little books or packets that will record, pictorially or otherwise, their developing experiences, thoughts and ideas. Books and packets were kept in the earlier stage, but not many, perhaps one larger book for "record" drawings and writings, but now several record books may be made and kept by each individual. Apart from the constructive skill and practice involved in their making, it is profitable for each individual to decide how his covers shall be made distinctive, and suitable for the different subjects. The form of these packets or booklets will not differ greatly from that of the earlier ones, in fact, more than one type of book may be needed to suit varying manipulative capacity, but at this stage the exercises will be larger, and the material perhaps stronger; more attention will be paid to strengthening hems, and stitching where before there was tying; there will be more pages for drawing and writing; decorative efforts and labels will be more ambitious. A certain standard of work will be aimed at, for the books must be worthy of the good work that they are to hold.

PLATE XXVI. NATURE NOTEBOOK.

Fig. 1 in the illustration shows the cover of the nature notebook ornamented with paper cut-outs.

Fig. 2 shows the first page of the book which is left blank for the insertion of drawings, with perhaps descriptive writings, of things done and seen in the Easter holidays. More than one page can be given to this subject.

Fig. 3 shows an example of a page which has been collectively planned on the black-board, then copied into the book, with a space left for individual writing or drawing.

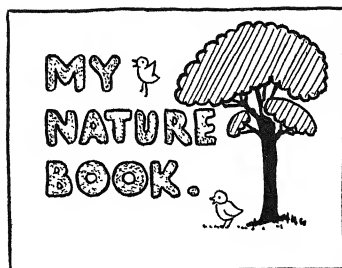
Fig. 4 shows two facing pages recording a nature walk.

Packets for collected material.— Frequently in connection with work centre or project

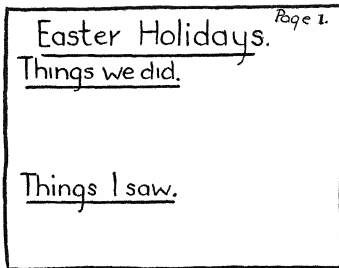
activities, pictures and newspaper cuttings are collected by the teacher and members of the class. Up to a point these can be pasted by their contributors on wall sheets provided for that purpose, but collections become unwieldy and wall space is limited, therefore we must adopt some storing device such as a large, loose-leafed scrap-book, or a series of wall packets or collecting envelopes.

The sorting, filing, mounting and labelling of collected material is not only valuable and useful work,—"real" handwork,—but it affords training in many of the devices that belong to handwork at any stage. Of course, the amount of responsibility that children can take over such matters is relative to their age and capacity, and to their home environment; it will always be found that where there is interest and co-operation at home, the children partake more thoroughly in any school activity, and particularly in one of the "make and mend" description.

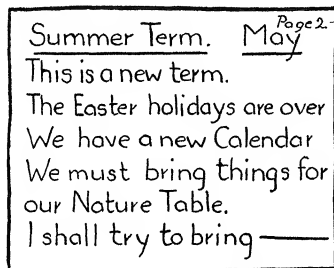
The child of five plus probably does not do much in the way of collecting pictures for school purposes, but the six-year-old who can read, and is really interested in some school activity is frequently zealous in his searchings. His enthusiasm stirs up that of his home people, so that drawings, cuttings and pictures arrive as rapidly as could be desired. Proper attention should be given to this material, generally it is wise to wait until there is sufficient to occupy a small group of careful workers, who will help the teacher at some time when other members of the class are busy with varied tasks (in the free handwork period), or simply with practice work. The careful cutting, mounting on uniform sheets of strong dark brown packing paper, pressing, labelling and storing of illustrative and reference material, are examples of community work, that should occupy some time and attention from all handworkers throughout junior and senior schools, and preparation for it can begin in a small way in the top classes of our infant school.



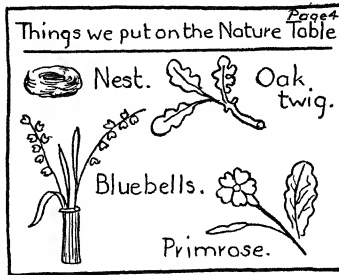
1. COVER.



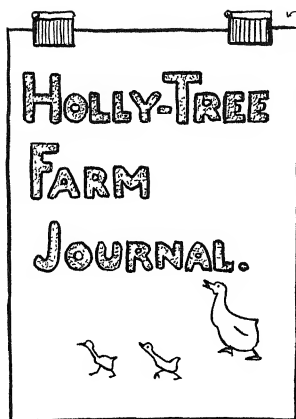
2. FREE PAGE OR PAGES FOR DRAWING.



3. PAGE COLLECTIVELY PLANNED, THEN COPIED, WITH SPACE FOR INDIVIDUAL WRITING AND DRAWING.

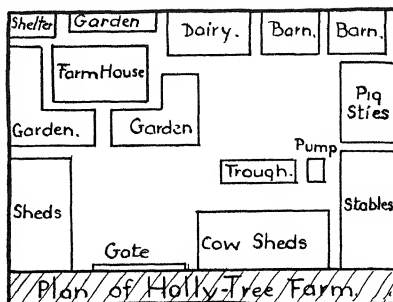


4. PAGES RECORDING A NATURE WALK



COVER.

large clips.



PAGE 1.

New Tenants.

Farmer Brown has taken Holly-Tree Farm. He is attending Cattle Markets and buying new stock.

Mrs. Brown and the three children are expected on Wednesday.

PAGE 2.



PAGE 3.

Co-operative records—friezes and backgrounds.—As has been said before, records may be individual, consisting of personal writing or drawing collected in a little book or packet. However, in relation to some activities (e.g., nature study or work centres), group or class records are good. These may take the form of a series of sheets that can later be assembled as a large book, or of horizontal wall strips that can be folded in zig-zag fashion to form a book. The class generally decides upon the name that shall be given to such volumes, sometimes it is the "Farm Journal," "Wiversfield News," "Toytown Gazette," etc. Such records are compiled collectively, they may be written by selected individuals in the large book, and illustrated with drawing or paper cuts by other individuals whose work is deemed by the group to be worthy or desirable. In this way handwork and art are shown to be related to all other forms of work.

Into this branch of our handwork relating to work and classroom needs, might be put the making of backgrounds and foregrounds for group or class models. As shown in the illustration, Plate XXVII., children in this connection can provide paper-cut pictures of handsome promenade buildings, to stand behind a box-made promenade and sea shore that in due course are to be furnished with all the skill, knowledge and artistry of the class. This model stood on a long table, of sufficient height to allow of its being fronted with another frieze, illustrative of the depths of the ocean, showing sea plants and creatures of every description, with divers, rocks and wreckage. All too often the setting-up, i.e., the preparation of space and place for a group model, is the teacher's special task, and represents her work solely. With sufficient enthusiasm and organisation this preparation can be, and ought to be, her children's work, and where the background and foreground are also made by them, there is no disappointing disparity or incongruity between the different parts.

PLATES XXVII and XXVIII. CO-OPERATIVE RECORD BOOK—THE FARM JOURNAL.—The larger illustration, Plate XXVII, shows some pages from a group or class record book, "The Farm Journal." The records are compiled collectively, written by selected individuals and illustrated by drawings or paper cuts. The cover is shown with two large clips at the

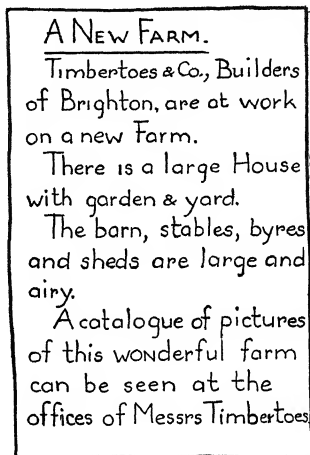


PLATE XXVIII CO-OPERATIVE RECORD BOOK—
"THE FARM JOURNAL"

top which attach the pages to the back of it. Page 1 shows an imaginary plan of the farm, pages 2 and 3 give an illustrated description of the family living there.

The smaller illustration, Plate XXVIII, shows an advertisement for Holly-Tree Farm, to tempt a purchaser or tenant. This notice may be put on the notice board or inserted in "The Farm Journal."

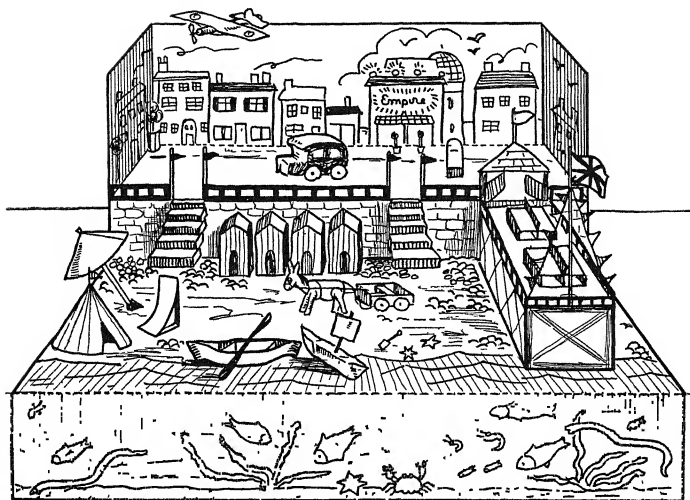


PLATE XXIX GROUP MODEL OF SEASIDE

PLATES XXIX and XXX GROUP MODEL OF SEASIDE.—The illustration, Plate XXIX, shows the complete model standing on a long table. The promenade is made of a long box, surrounded on three sides by a cardboard background, bearing cut-outs of handsome promenade buildings, which have been freely drawn, cut out and pasted on. The details of this model will depend entirely upon the experience and wishes of the children. It can be as elaborate as time, space and interest permit. If the model is large enough, people of every variety, made of clay, paper or pegs, can be added. The top of the box makes the promenade itself, which is furnished with upright paper or cardboard shapes, such as letter boxes and motor cars.

Along the edge of the promenade runs a paper railing, the making of which is shown in Plate XXX. The front edge of the box

is marked in crayon or paint to represent bricks. Steps, shown in detail on Plate XXX, lead from the promenade to the shore.

The shore is covered with tiny, real pebbles and sand. Various models, a tent, sunshade, deck chair, bathing huts, etc., can be added to the shore, according to the skill and ideas of the children. The pier is made of a shoe box covered with paper. The struts and bars are strips of dark paper pasted on. Waves are drawn, or added with coloured paper, on the front edge of the shore. A co-operative record frieze of nature work, representing life under the sea, may be made and hung from the edge of the table.

The illustration, Plate XXX., shows how the steps leading from the promenade may be made. For immature workers, pleated paper, with the top and bottom flaps pasted down, is sufficient, Fig. 1. Older children

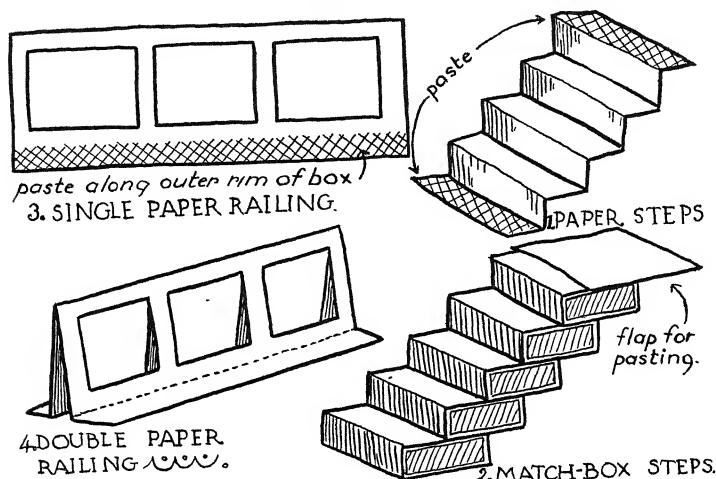


PLATE XXX GROUP MODEL OF SEASIDE

may gum match boxes together, and fix them by a flap at the top, as shown in Fig 2

Railings for the pier and promenade are also shown in Plate XXX. The easiest method is a railing of single paper pasted along the bottom edge to the outer rim of the box, Fig. 3. Another method is to make a railing of double paper with the bottom edges turned outwards to make flaps for pasting, Fig. 4. Alternatively, the railing to the promenade may be a low matchbox wall.

Properties for dramatics and work-centre activities.—Other needs may arise in the shape of properties for some dramatic performance, or the finishing touches which complete the activity of a work centre. As an example of such needs, a certain classroom "theatre party," having made itself a stage from boxes, with a real curtain to draw, rehearsed the performance of the *Pied Piper*. Most of the chief character

costumes were improvisations, but it was found that a swarm of rats needed paper headdresses. In another case a tribe of Indians needed war dress for a grand pow-wow, and much time was spent in preparing male and female headdresses, tunics, necklaces, weapons, and papooses. On another occasion the Mayor and Corporation of Puddleby decided to hold a reception, half the class became scribes, who prepared the official cards and envelopes and wrote out invitations, the remainder made mayoral hats and chains, and other forms of civic decoration such as flags and bunting. The children may decide to hold special sales at their stores, to arrange half-day excursions on grand railways, etc., and in these ways properties of every description are needed, which are provided both in and out of school hours.

It might be well to suggest at this point, for the comfort of the tidy-minded, that

when individual properties are required and used, each child should have his own equipment in a labelled newspaper bag, which he makes for himself at the outset. In this way much fuss, worry and confusion can be avoided. In any case, if these joyful occasions cannot be taken in the stride as a natural part of any day's work, affording all the interest and variety in training that is necessary, then they are more to be avoided than sought after, from every point of view.

Festivals.—Other tasks that belong to the category of directed handwork may be those arising from the interest that the infant school rightly takes in festivals. Christmas cards, Easter cards, Valentines, birthday cards and invitations are as much, or perhaps more needed than in the earlier stage, for the child's circle of friends and acquaintances widens as his interests extend to people outside the home circle. We have already spoken of the importance of the class or school letter box, and at this stage it is almost at its peak of importance. Reading, writing, art and handwork periods all contribute, and become purposeful in the preparation of something for the letter box. All types of simple accurate exercises can be planned and practised in connection with the making of any of the articles suggested above. The six-year-old learnt to fold and paste accurately, to place his paper cut neatly and pleasingly, to stencil or to print with cork and stick. He can even begin to use a simple short card ruler or measure, and make, following very simple written instructions and diagrams, his case, cover, or envelope to hold his card or gift, from the paper that he has previously prepared with all-over gay "writing" patterns in his drawing or free handwork period.

3. TOY AND MODEL MAKING

Among these more directed handwork periods occupying a group or class, may be

included what is generally known as toy or model making. Such work may be connected with some special centre of interest, and be of an individual or co-operative description, or it may be purely individual, an object just made for the fun of the thing, or as a gift for someone else.

Group models.—Let us think first of tasks relating to some centre of interest—the setting-up of some model that is to express ideas and experiences gained in other lessons. The model may be anything from a sea shore, fair ground, playground or park, farm, garage or petrol station, harbour, railway, village, Never-Never-Land, to a river bank or a complete Toy Town. Time and space, and of course the interest and capacity of the class, decide what the model shall be. Capacity, or the lack of it, need not deter us, or limit our range quite as much as it is frequently allowed to do, for a model may be just as simple, or as difficult and complicated, as the interest and skill of its makers decide.

The farm made by the Fives is different from that produced by the Sixes and Sevens, in the former, buildings may be just representative, scale worries are very few, machines need not work, the whole thing is gay and complete and viewed more from the point of view of what it is supposed to be, than from what it is, the activity of making has satisfied the child and the result is seen through the eyes of the imagination. The worker of six or seven years old demands more reality, the parts of his model must bear some resemblance to the real thing, if possible wheels must go round, scale is important, and the material must recall that of the original. This older child is critical and materialistic, slapdash in his methods, but also, when given real opportunity, often ingenious, creative and very patient.

Model making may be an extremely interesting and valuable form of handwork, or it may be exactly the reverse. People who have seen it only badly done are, not

unnaturally, difficult to convince that it can be otherwise. A great measure of the success of the work depends upon the teacher, not so much upon her own particular skill in this branch of handwork, as upon her power to visualise a completed thing, to put its possibility as a worth-while project before her class, to plan with them time, ways and means, requirements and materials, and to enlist at the outset their interest and co-operation. A teacher who induces that state of affairs is frequently filled with admiration and respect for her children, and knows that they can be depended upon for ideas far more fresh and original than any she could suggest. With the younger model makers the teacher has to do a considerable amount of preparation in connection with the setting and background of the model, if the whole is not to be a disappointment, and if she desires to gain their interest and co-operation from the start. The provision of space, a large box, or tables grouped together, with the suggestion that they are to be used for a particular purpose, makes the vision of a model seem more concrete, immediately the idea challenges and fires the children's imagination so that hardly an hour goes by without a suggestion from some member of the class or his relations, in this way a start is made.

The interest thus aroused must not be lost by delaying matters, the big main essentials that hold for everyone the idea and meaning of the model ought to be made first. The children become architects, builders, or whatever type of workman their task represents. Next the human element must appear, the house, farm, or whatever it is, must be let and peopled accordingly, and doll making begins. Lastly, these people need equipment for life, for work, for leisure, and so the details of the model appear, sometimes at the suggestion of the teacher, but more generally at the suggestion of individual members of the class.

While this work is going on, there should be, if possible, experiences and certainly

pictures, to give children more correct ideas. Toys and ready-made models help in this connection, so too, do visits to Woolworth's and to toyshop windows. There should be time to discuss the progress of the model, to think together what the next contributions are to be, to plan ways and means generally, and to talk over suggestions and contributions from out-of-school sources. The notice board should be kept busy with reminders and suggestions. Fathers and mothers ought to be invited to visit and co-operate, trial experiments of every sort, undertaken either in or out of school, ought to be valued and given their place.

To anyone uninitiated in this type of handwork, these suggestions may sound desirable but impossible, particularly in dealing with the over-large classes of our infant schools. Numbers, however, are to a certain extent a safeguard, they prevent the work from being unduly overlaid by the teacher, and ensure that at least some members of the class have the chance to work independently without constant supervision and irritating suggestion. Far bigger hindrances to successful work are lack of space and too short a period allotted to handwork.

With regard to lack of space, which is a serious problem even in the newest schools, conditions can always be improved to some extent. A rearrangement of furniture, if only for the handwork afternoon, is well worth while and is never a waste of time, the desks and tables can be grouped, for all heads need not be turned one way, thus ensuring that the children and the teacher have space to move, sit, kneel or stand at their work, and to survey the fruits of their labours when assembled in the model, the setting out of which is made possible by the increased floor space.

The whole project needs careful thought and organisation by the teacher before it can be offered to a class in a really acceptable form. Later, when the work is in progress, each period allotted to it needs similar thought and organisation, even though the

nature of the task may be determined by the class for the most part. In surveying the possibilities of a particular subject for model making, the parts that make up the whole to the adult teacher's mind are more numerous and elaborate than are those essentially representative of the idea to her children. It is a good plan, therefore, to begin by making a sketch to decide the possibilities for a background and foreground, then to make a list of buildings and big main essentials, next to enumerate people, and lastly to note possible and more individual details and additions. This list when viewed in the light of time available, the capacity of the class and the space for setting up, is liable to be considerably pruned before setting to work, and even after the work is in progress. But it will be found that because the project has been planned as a whole, the parts are co-ordinated; the shorter tasks or less elaborate parts can be omitted, without that incompleteness and lopsidedness that are so disappointing and which nearly always result from an incomplete survey of the situation at its inception.

Certain parts of a model, e.g., separate buildings, are definitely individual tasks, and a fair quantity of them may be necessary for the model. In this case it is a good method, after the plan and layout have been discussed with the class, to make as a class exercise this particular or necessary type of building. This does not mean that identical products are required, the children are trained in making the main features, and the period allows time for independent thought and the finishing touches that make even class work individual and original. Usually, not all of these buildings are required for the model, and the class, not the teacher, should always see and choose those which are suitable, the other models go home to be added to, or experimented upon, and improved for future play or use.

Other minor tasks may be undertaken along group-work lines, each group knows its work and where its materials are, and

follows the suggestion of a completed piece of work, or possible simple diagrams and instructions from blackboard or wall sheet. Such additions to a model as trees, fences, hedges, lamp posts or pillar boxes, etc., would be provided in this way. While several groups are so engaged, a chosen group may be helping the teacher with a more difficult piece of construction, or they may be receiving instructions in a particular device, e.g., figure making,—one of the most difficult and yet most interesting and essential parts of any model,—which they can help to communicate to the remainder of the class on a subsequent occasion.

Before leaving the question of the buildings and large structural parts of the model, it would perhaps be well to say a word as to the method of making these parts. With the younger children of this stage, the sixteen-square stiffish paper construction is frequently satisfactory. But when a model is more elaborate and is made to last and be used, paper, even stiff paper buildings do not serve, except for small parts. The adapted cardboard box is far more satisfactory, and the necessary additions in the way of porches, verandahs, chimneys, small annexes, etc., can be made of paper folded on the sixteen-square lines. Where it is not possible to get a cardboard box of the right size, frequently a foundation core or block can be built up of match boxes; this, when firmly fixed can be covered and adapted for almost any purpose. In this connection, let me give a word of warning, thin flour paste, gloy, or any of those otherwise admirable cold water adhesives, will *not* stick cardboard or match boxes for impetuous young workers,—even the careful adult finds them difficult to stick. A stronger adhesive such as Arabel (shoemaker's paste), thin glue or even seccotine is essential for happy and effective work.

With certain parts of the work, it will be found that the scale becomes at times too small for the children to work upon as a directed exercise without strain, and this is another point in method and organisation.

worthy of attention. Moreover, in demonstrating to young children, it is advisable to use a piece of material of the same size and nature as that they will use themselves, in order not to confuse them.

Figures for group models.—Figures, representing the human element that has been mentioned as being of first importance to the children, rank first among those parts of the work which present difficulty as to scale. Another difficulty is that every child wants to make one of the people, often some enthusiasts are also making models at home, and the group model does not need the output of forty workers. What is the teacher to do? She is wise if she announces that the class is going to make doll people of the type that could inhabit the model, only larger. Then she begins delightful excursions into all forms of doll and figure making. Another word of advice can be given here, that dolls and doll materials should be kept in individual work boxes, to avoid heartburning on subsequent occasions.

Children of the ages we are considering, can make dolls of a variety of types, but we shall deal first with those that are suitable for independent reproduction on a smaller scale for model-making purposes.

The simplest form of figure after the clay one, is the folded, symmetrically-cut, paper figure; this, slightly bent, with the details of front and back view carefully drawn and coloured, provides the youngest children of this stage with a satisfactory standing doll or figure.

The self-drawn, coloured and cut out doll comes next. This may be a product of the drawing lesson, the people needed for the model are considered from the point of view of dress, posture, grouping, etc., and are drawn and painted on a generous scale. Subsequently these are carefully cut out and pasted either on double paper, the two sides of which are pasted together except along their lower edges, or on limp board such as a postcard. The pasted figure

is then pressed, and when dry again cut out, if necessary the back view of the figure is drawn and painted on the reverse side of the paper or cardboard. The figures on double paper can be made to stand by folding back the two lower edges of the paper and pasting them to another oblong piece of paper or thin cardboard, of sufficient size and weight to form an efficient standing base. A figure mounted on cardboard, if cut out with a level standing-piece at the foot, can be kept erect by sticking it into a small knob of clay, or by attaching it with seccotine to half a cork, a small piece of strip wood, or a paper bead. The addition of a cardboard or strong paper foot or flap is another method of making a cardboard figure stand, the depth or height of the flap depending upon the height of the figure; lastly, if we wish to be rather extravagant, a metal clip, made by bending a metal paper clip with scissors, forms an extremely steady means of support. These same methods are useful on trees, hedges, fences, herbaceous borders, etc.

So much for flat paper figures, but something a little more solid and satisfying is soon desirable. Newspaper, or some of the softer wrapping papers, make satisfactory babies, children, or long-skirted women old and young. The method for all is practically the same, the head is formed by making a ball of crumpled paper, this is placed in the centre of a larger square of paper, which is drawn round to enclose it, and the neck is tied tightly round with, for preference, a strand of wool. A further amount of paper padding may be tucked inside the covering paper and then tied again lower down to form the waist, lastly, the newspaper skirt is straightened out, and cut level for standing. Such a figure, after receiving a face which is crayoned or painted on a separate oval of paper with snipped edges for attachment, and perhaps hair of fringed paper, old stocking, cloth or wool, may be completed by being given a paper or material bonnet, shawl, skirt and apron. If her owner is particular, and

insists that the doll must have limbs, at least arms, these can be fashioned from a long tight roll, made by rolling an oblong of paper cornerwise (starting over a pencil), turning in the ends and securing the final flaps with paste. This forms two arms, which should be attached by being placed across the back of the figure, and then wound with wool in criss-cross fashion around the neck, across the chest and back, and under the arms until firm, when the ends are secured by tying.

A figure with arms can be clothed in magyar garments, cut either in gay wall paper pasted together, or from material sewn up. Dolls such as these can be thoroughly well made with great satisfaction by either girls or boys of this stage, provided that they work spaciouly and happily. One thing most valuable about this task is that uniformity is impossible, for no two dolls are alike.

We pass next to material of a ready-made description, and try our hand at peg dolls, which are satisfactory up to a point, but which frequently refuse to stand,—for alas, even pegs are not what they were! The heads of the pegs may or may not be covered. If covered, the covering material is tied tightly round the neck, and a little padding to give better form would not be amiss. Arms are generally desired, and for these a leaden hair curler laid across the back of the peg and secured with criss-cross wool wrapping serves, better still is a wire pipe cleaner, doubled, twisted and similarly attached, or secured by being given one twist round the neck. To complete the figure the wooden or material-covered face is painted, and hair of spun or raw wool, fur or crêpe hair is attached. Clothes of material or crêpe or tissue paper are put on, and the doll is satisfactory in all ways except in standing, unless her petticoats are sufficiently long and stiff to spread out and give support. If left to themselves, children frequently solve this standing problem by resorting to a base of clay or plasticine. Sawing or filing off the uneven tips of the

peg, and attaching a wooden or cardboard sole or foot with seccotine or small nails is the only real solution, and one somewhat beyond the reach of a number of these children.

Other types of figures possible for this age are such as would be made in toy-making periods, using sewing methods, and are not practicable from the point of view of being made on a smaller scale, or of being used in connection with model making. All the types described above are capable of being made on a smaller scale by the more nimble-fingered of our children without strain, if they are not using the method for the first time on the smaller figure. The method should be learnt previously, working on a larger doll, perhaps further practice is obtained at home in making dolls of varying sizes, and then the task of making one to fit into the model can be safely undertaken. The peg doll is not capable of reduction in size, but, generally speaking, a model of a scale too small to admit the inches of the peg doll is unsuitable for these young children.

The dolls for the model can therefore be made, some as voluntary contributions, others as the result of group work at tables and desks set apart for that purpose, while other types of group work are in progress.

In connection with model making, it is frequently found that time is all too short, the weeks slip past and still the model is not finished, and interest on the part of some members of the class appears to be waning. Then comes the temptation to the teacher to stop the work and start something new. This is disappointing, and definitely bad training, and when such a temptation comes, we should remind ourselves of the old Scottish saying, "Fools and children should never see things half done." Yet what is a teacher to do? She must by her energy and enthusiasm help the work along, arrange and organise, so that each period devoted to the work "gets somewhere." She must make full use in her methods of the enterprise and initiative

of her class, and most important of all, make a link between school and home, by suggesting that at home certain tasks shall be attempted or perhaps completed

A wonderful means of saving time is the notice board, when children can read. Failing that, it is helpful to spend a few minutes at the end of the lesson devoted to telling the children, or considering with them, what is the nature of the next task, and perhaps what they can do to prepare for it. Then, when the next lesson comes, the children have something to contribute, they have thought about the task, perhaps attempted it, and everyone can set to work promptly

PLATE XXXI PAPER FIGURES FOR GROUP MODELS—Fig. 1 shows the simplest type of paper figure. Half the shape is drawn on paper folded double, and cut out. The figure is then opened out, coloured back and front, and made to stand by being slightly bent along the fold

Fig 2 shows a cut-out figure, which may be the child's own drawing or a cutting from a newspaper or magazine. This is mounted on thin card with an oblong at the base and supported by a bent paper clip, as shown

Fig 3 shows a figure cut from paper folded double, with the fold at the head end. The ends of the paper are folded outwards and the figure is drawn on one side of the double paper with its feet on the lower crease line, as shown in the smaller illustration. The two sides of the paper are then pasted together leaving the lower flaps free. When dry, the figure is cut out with foot flaps and coloured on both sides. The model will stand as it is, but is made more steady by pasting the foot flaps to a base of paper or card, as shown

PLATE XXXII NEWSPAPER DOLLS—Newspaper, or some of the softer wrapping paper, is suitable for this figure. The head is made from a ball of crumpled paper, which is placed in the middle of a large square of paper. The paper is drawn

up round the ball and tied with wool to form the neck. More paper padding is tucked inside, below the neck, and wool is tied round lower down to make the waist. The arms are made from a roll of paper which is placed across the shoulders at the back and bound on with wool. The lower part of the paper figure may be trimmed and pulled out to make a skirt, as shown in Fig 1

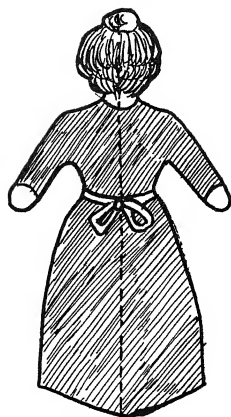
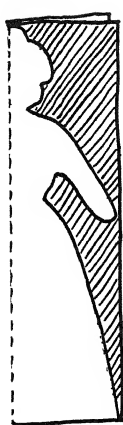
The face, shown in Fig 2, is drawn or coloured on an oval of plain cream paper. The face is snipped all round the edge, and the whole is pasted on the wrong side and pressed to the head so that it fits snugly

Hair, Fig 3, is made from strips of paper 1 in wide. The strips are fringed along one side with the scissors and attached to the head in overlapping layers, starting from the base of the neck and working upwards. Crêpe paper, with the crinkle running down the fringe, is the best material to use. Fig 4 shows the head with two layers of hair attached. When all the layers are added the hair can be trimmed with the scissors finally

If desired, legs may be added to the figure, instead of the lower part of the body forming a skirt, but the process is rather more difficult. The legs, like the arms, are made of a long roll of paper, which is placed across the front of the middle of the skirt, as shown in Fig 5. The end of the skirt is then turned up over the roll, Fig 6, and bound up with wool

PLATE XXXIII PEG DOLLS—Fig 1 shows a peg doll, undressed, with arms made of a pipe cleaner which is twisted round the neck and turned up at the ends to form the hands. The face in this case is painted on the head of the peg, and tufts of dyed cotton wool are stuck on to form the hair.

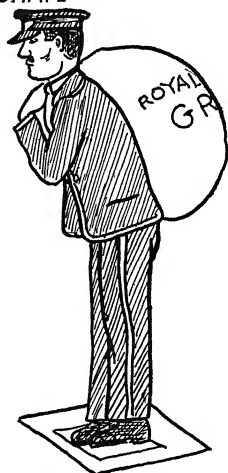
Fig 2 shows a peg doll dressed in paper clothes, with a wide, stiff skirt which enables the figure to stand. In this case the head of the peg is padded with soft paper,



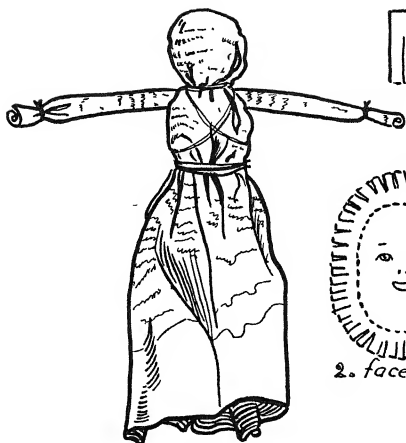
1. SIMPLE FOLDED PAPER SHAPE



2. CARDBOARD FIGURE
SUPPORTED BY PAPER CLIP.



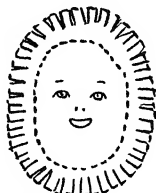
3. DOUBLE PAPER FIGURE
ON CARDBOARD BASE.



1. figure with arms.



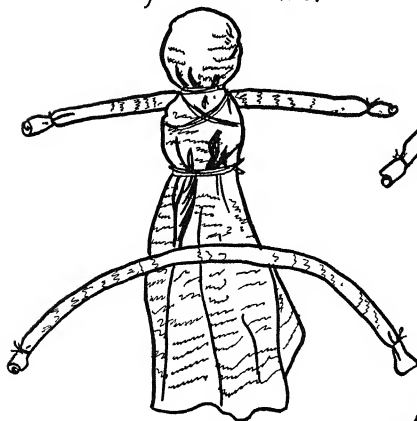
3. hair.



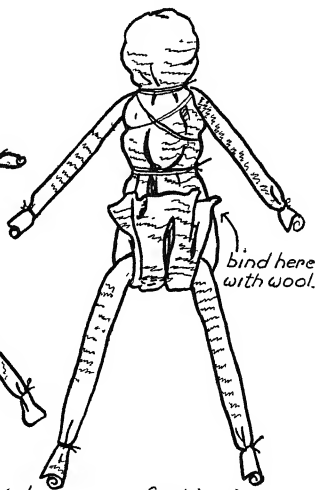
2. face.



4. back of head.



5. legs placed in position.



6. legs ready for binding.

PLATE XXXII NEWSPAPER DOLLS

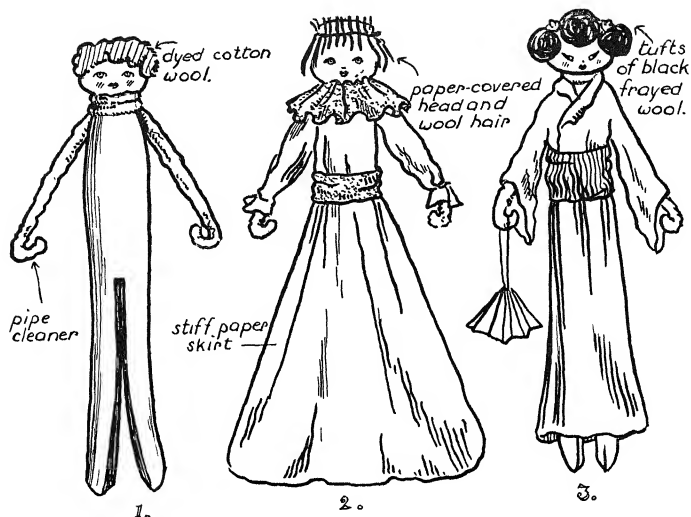


PLATE XXXIII PEG DOLLS

and tied up in a paper covering. The face is painted on the covering and strands of wool are tied on for hair

Fig 3 shows a peg doll dressed in a material or paper kimono as a Japanese. The hair is made of black frayed wool stuck on the head of the peg. Paper flowers are put in the hair, a fan is in her hand, and a soft paper baby can be made for the doll to carry on her back

The making of individual toys and gifts.—

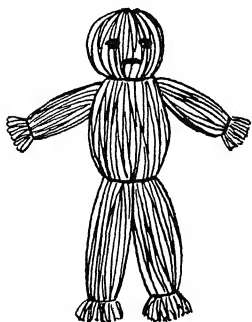
The children that we are considering are still highly individual, although they participate profitably and happily in co-operative forms of handwork, such as that demanded by the class model, nevertheless, the desire of each is to make something "for myself, to take home this very afternoon to my own mother," and the teacher must provide an outlet for this desire. To

a certain extent the individual or free handwork period already described meets this need, but not entirely, at least not for children poor in ideas and initiative. Therefore it is a good plan to provide occasions when the class or large group of children may make simple toys for themselves or other children, or gifts for older people. Besides satisfying the individualistic needs of childhood, such lessons give children ideas for the use of their leisure. Wet days, days of convalescence and disappointment, need not be dreaded by children and parents, for here is an opportunity to suggest suitable occupations.

The younger members of this stage can make from paper of all sorts such "excitements" as flags and torches, simple banners and kites, windmills, paper boats, quack-quacks, masks and highwaymen's or robbers' hats, flying birds and butterflies, Christmas

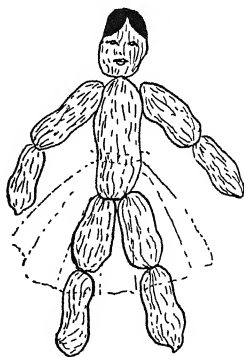
trees, lanterns, paper magics, book marks, etc. The older ones can make better and bigger kites, weather vanes, more elaborate windmills, coloured tops, paper dolls and families to be dressed and undressed, jointed animals and figures in lump board (as book marks), and record cards. Even book covers provide the slight amount of measuring that is acceptable and necessary to the enjoyment of the task. Paper houses or shops of the threefold screen variety, equipped without and within with paper-cut or paper-folded goods and figures, and paper panoramas illustrating story scenes, afford opportunities for much profitable concentration and display of energy. Dolls made from soft materials and constructed by sewing methods are another type of toy very satisfying both to boys and girls, though a boy who thinks the task babyish or silly, ought neither to be argued with nor coerced, but quietly be given another task, either of an occupational nature, or the constructive one of providing some property that these dolls might need. The making of dolls' properties for his or her

individual doll might be the next task for these doll makers; e.g., a bed or cradle from a shoe box, a chair or shoe-box pram. Materials for making dolls cost little or nothing, apart from some outlay for suitable needles, pins and perhaps sewing thread, though the latter, like most of the doll-making material, can be collected and stored until the work begins. Sometimes, when the pieces collected are small and scrappy, a few yards of a thin, cheap unbleached calico are a wise investment. Teachers who live in the neighbourhood of cloth or cotton mills will find the varied oddments, or "fents," of the greatest interest and value in this type of work. A thin Egyptian cotton of silky texture and creamy colour is often obtainable at a few pence per yard, and nothing could be softer or better for these weak-fingered ones to deal with at the outset of their sewing activities. For stuffing there are many possible materials,—soft paper, torn or softened newspaper, clippings of material, old silk stocking legs, fine packing paper, or wool from the nearest sweet or tobacco shop



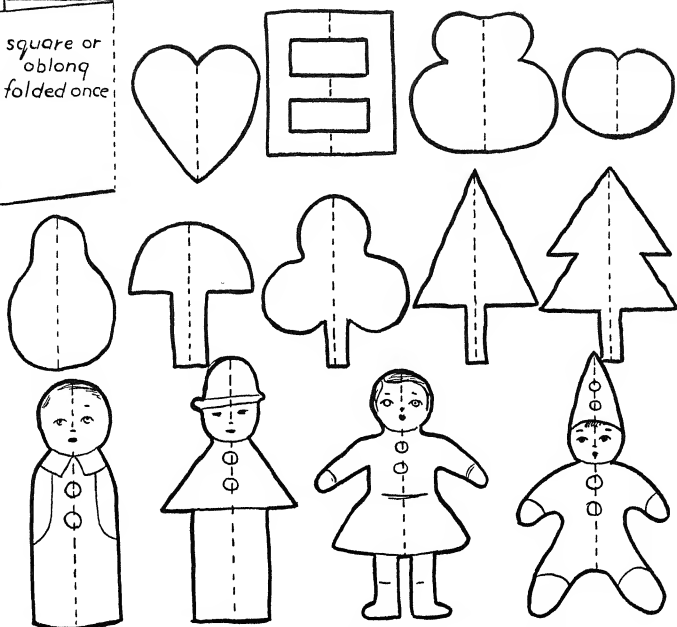
GOLLIWOG OF WOOL OR RAFFIA

P-VOL III—5

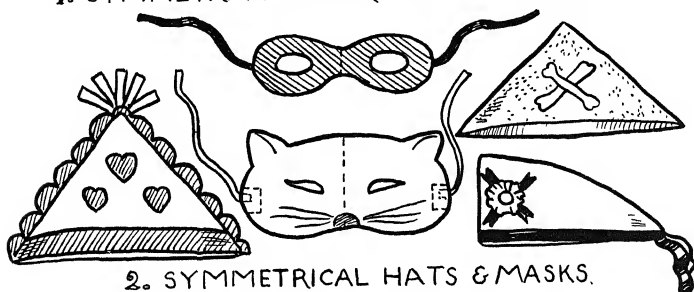


DOLL OF THREADED MONKEY NUTS
WITH PAPER SKIRT

square or
oblong
folded once



1. SYMMETRICAL DECORATIVE CUT-OUTS.



2. SYMMETRICAL HATS & MASKS.

PLATE XXXIV SYMMETRICAL PAPER SHAPES, HATS AND MASKS

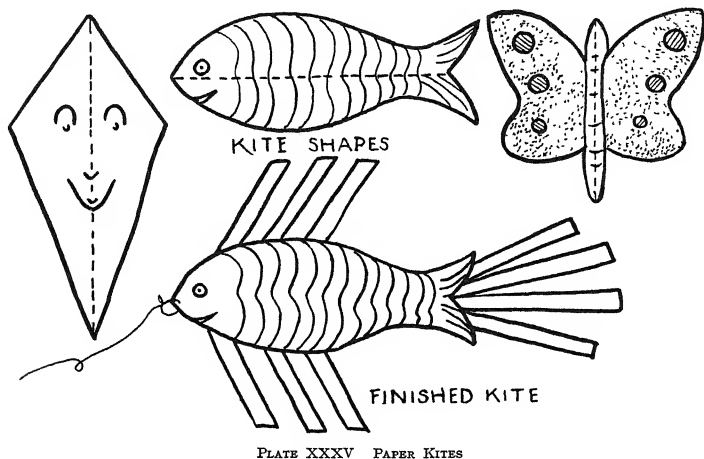


PLATE XXXIV SYMMETRICAL PAPER SHAPES, HATS AND MASKS—For paper shapes, ribbon paper, coloured handbills and soft wrapping paper may be used. The paper must be cheap and plentiful, as there must be ample material for experiment and repeated attempts. Shiny adhesive paper is unsuitable for this purpose.

All the shapes shown in Fig. 1 are freely cut from a square or oblong of paper folded in half. The units should be made for some purpose, either for decoration or to paste in a scrap book.

The hats and masks shown in Fig. 2 of the plate are cut from paper folded in half. Decorative cut-outs and strings are added afterwards, or two similar shapes are pasted together.

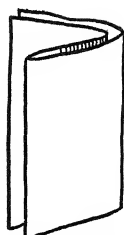
PLATE XXXV PAPER KITES—The shape of the kite is first cut out of paper folded double, and used as a template for cutting out a second side to the kite. Streamers, fins, tails, etc., are cut out and

pasted to the underside of one shape, then the second shape is pasted over to enclose the ends. Lastly the kite is coloured and a finger string added.

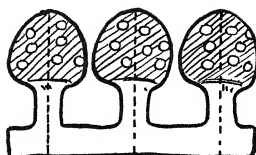
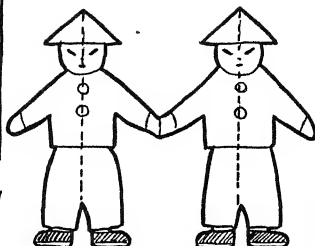
PLATE XXXVI. PAPER CUTTING.
Friezes and stencils.—Fig. 1 shows a number of friezes and borders cut from a strip of paper folded twice. The waste material from a border can be used as a stencil.

Doll with clothes—Fig. 2 shows the figure of an undressed doll which is cut from paper folded once. Clothes, also cut from folded paper, are cut out with flaps on the shoulders. The flaps are bent down so that the clothes rest on the doll's shoulders. A wardrobe of clothes may be made and coloured. The figure of the doll may be mounted on thin card and made to stand by any of the methods shown in Plate XXXI.

Chains for decoration.—A simple paper chain is shown in Fig. 3. A long strip of



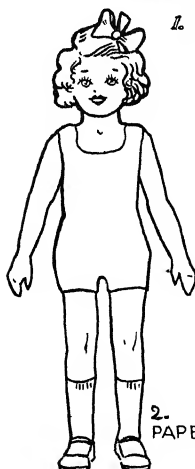
strip folded
twice or
more.



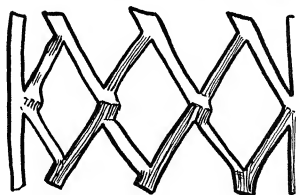
(stencil of waste
paper

1. BORDERS AND STENCIL

fold.



2. PAPER DOLL & DRESS.

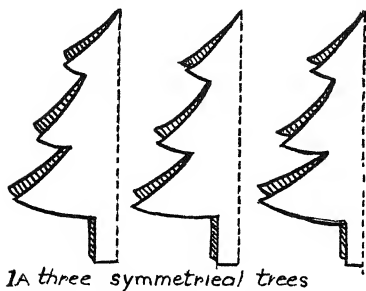


3. PAPER CHAIN.

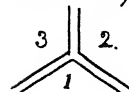
PLATE XXXVI PAPER CUTTING

paper is folded in half lengthways, then snipped alternately, along both edges, as shown, so that the cuts reach nearly to the opposite side. The paper is then opened out and pulled from the ends to make the chain.

PLATE XXXVII THREE-SIDED PAPER DECORATIONS For tree — Attractive decorations to stand or hang up may be made from three similar cut-outs pasted together. Fig. 1 shows a fir tree made from three similar shapes cut from



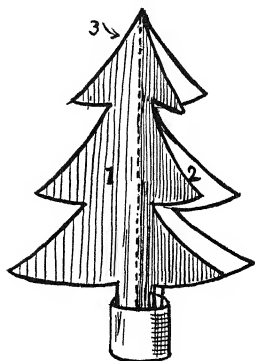
1A three symmetrical trees



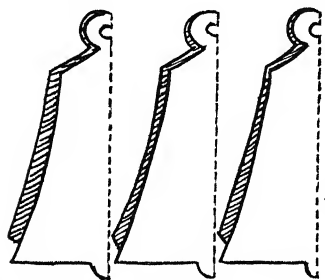
1B pasting plan.



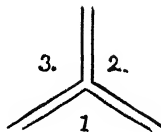
1C. paper tub.



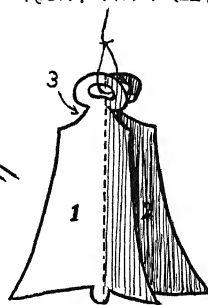
1D UPRIGHT FIR TREE.



2A three symmetrical bells



2B pasting plan

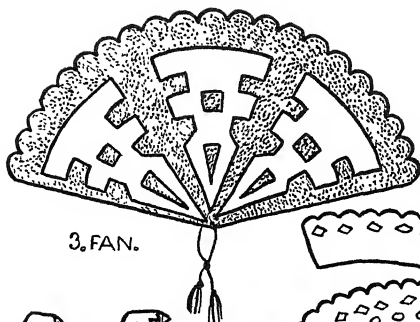


2C HANGING BELL.

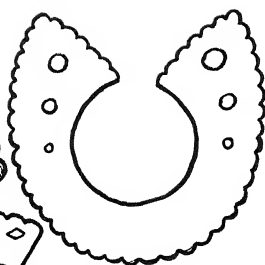
PLATE XXXVII THREE-SIDED PAPER DECORATIONS

paper folded double, the first shape being used as a template for the others. The undersides of all three shapes are pasted, and pressed together as shown in the plan, Fig. 1B, and the resulting tree will stand by itself. A coloured paper tub, Fig. 1C, may be made for it, as shown.

Bell—Fig. 2 shows a bell made from three similar shapes cut from paper folded double, the first shape being used as a template for the others. The undersides of all three shapes are pasted, and pressed together as shown in the plan, Fig. 2B, and the resulting bell can be hung by a string through the top.



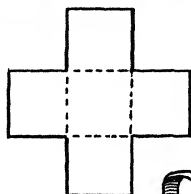
3. FAN.



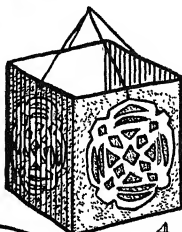
1. MAID'S SET.



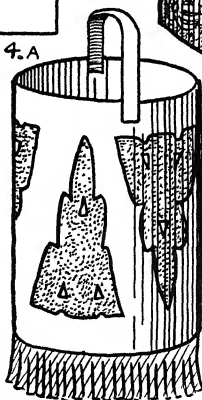
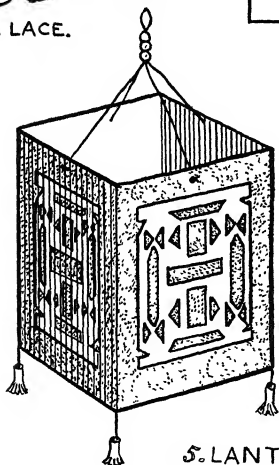
2. LACE.



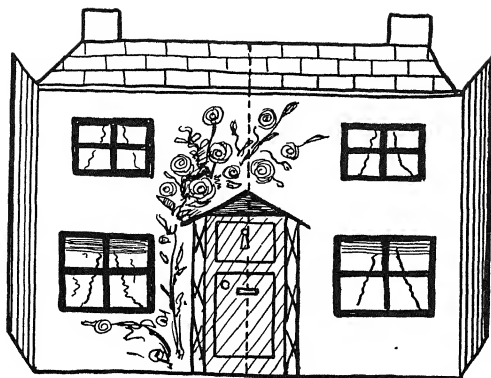
4. A



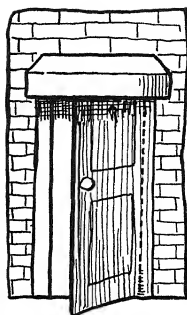
4.
HANGING
GIFT
BASKET.



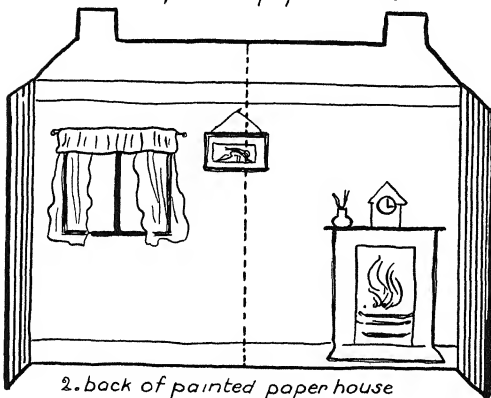
5. LANTERNS.



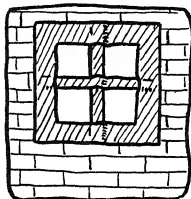
1. front of painted paper house.



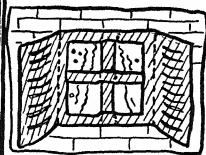
3. appliqué door.



2. back of painted paper house



4. appliqué window.



5. appliqué window with shutters.

PLATE XXXIX PAPER HOUSE

PLATE XXXVIII. PAPER MAGICS
Articles of drapery—Paper folded and cut can be made to represent various articles of drapery. Fig 1 shows a maid's set, of collar, cuffs, and a cap, Fig 2 shows yards of lace measured and priced.

Fan—Fig 3 shows a fan made of double paper or limp card decorated with three similar cut-out patterns.

Gift Basket—Fig. 4A shows the plan of making a hanging gift basket which is decorated on each side with a cut-out pattern, Fig 4. The basket is hung by strings tied to the sides.

Lanterns.—Fig 5 shows a square and a tubular lantern decorated with cut-out patterns

PLATE XXXIX PAPER HOUSE—The shape of the house is planned on double paper, then cut out. The exterior and interior decorations, windows, doors, etc., may simply be drawn with coloured pencils, or painted. Fig 1 shows the front of such a coloured house, and Fig 2 the back. Alternatively, the doors and windows may be separately cut out and pasted on. Fig 3 shows such an appliqué door in position, and Figs 4 and 5 show appliqué windows. The inside may be furnished with solid constructions made of paper or match boxes.

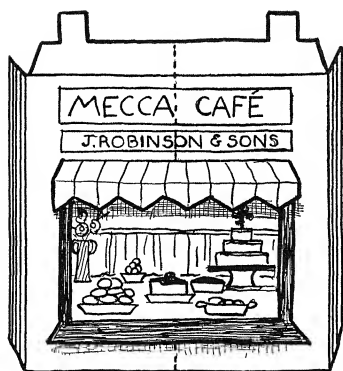
PLATE XL PAPER SHOPS—The shape of the shop is planned on a piece of paper folded double, and then cut out, in the same way as the house already described. The shop window with blind and shelf may be drawn on a separate piece of paper and pasted on, as shown in Fig 1. The blind and shelf are bent to project. Details of the inside of the shop may be coloured or added in appliqué work to the back, as shown in Fig. 2.

Alternatively, the shop front can be cut out and the flaps bent to form a blind and shelf, as shown in Fig. 3.

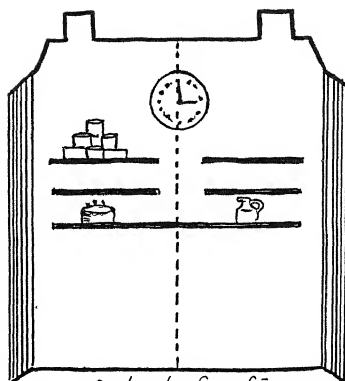
Cut-outs of articles to sell, Fig 4, can be made with a flap at the base so that they can be pasted to stand upright on the shelf.

A paper figure of the shop keeper cut from folded paper can be made to stand by the shop, Fig 3.

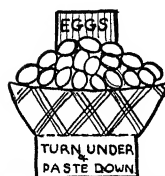
A stocking baby.—One or two types of dolls suitable for this older group have been already mentioned in connection with the free handwork period. Another more advanced type, involving more sewing and skill, might be undertaken by the Sevens in a period or periods such as we have been describing. This doll is made on the lines of a stocking baby, with head and body in one piece, and arms added separately. Some Sevens can draw and cut out their own patterns, failing that, the children take their own paper patterns from a set pinned to the notice board before the lesson begins. Pieces of material of the required size are provided, which are folded and tacked round the edge. Each child pins his pattern on the material and traces round it with his pencil, no cutting out is done until after the child has stitched round the shape on three sides, closely following along the pencilled lines. Running or tacking stitches may be used, working first in one direction and then in the reverse way, or closer running stitches may be used in one direction only, with an occasional back stitch. A piece of work showing the exact firmness of stitching required, ought to be shown to the children for comparison with their own work. After stitching, the children cut out their shapes, leaving a margin of at least $\frac{1}{4}$ in. The free edges are afterwards turned down and tacked round, then the shape is turned to the right side and is ready for filling. The stuffing must be carefully packed and the figure moulded to a good shape, then the lower edges are pinned together and firmly oversewn. If arms are desired, each one can be made on the pattern of a long slim bolster, which is similarly stitched and turned, then filled



1. front of café.



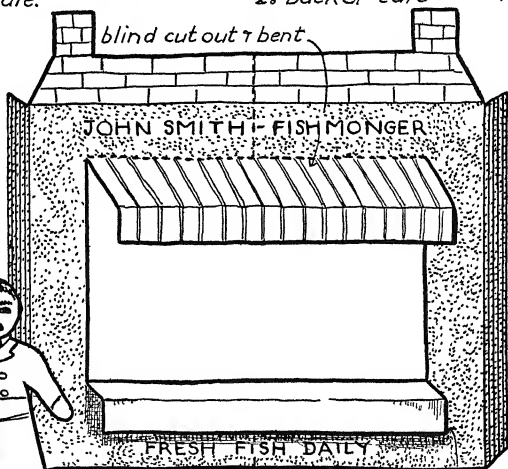
2. back of café



4. upright cut-out for shop window.



figure of single paper bent to stand.



3. fishmonger with fish shop.

and sewn up. Each arm is attached firmly by its top edges to the shoulder, and finally given a tight twisting of thread round the wrist to separate the hand from the arm. Faces and hair can be added in the manner already described, and there remains only the important question of costume. Sometimes the children will dress their dolls as Red Indians, in yellow duster garments with beads and much hen feather, others may choose to represent them as a band of Arabs, or the family for the doll's house, while others will dress them as ordinary children. They should be dressed freely by their owners according to their tastes, in some cases the work may be done partly at home and partly at school; or, for the little girls particularly, the doll dressing may become the centre of a whole series of sewing and knitting activities, and thus an approach to needlework is made through a real need.

PLATE XLI STOCKING BABIES.—

The paper pattern, Fig. 1, is freely cut out by the child, or cut from a pencilled outline. For the youngest children a set of patterns can be cut by the teacher in strong, tough paper, and pinned to the notice board. The children are then made responsible for taking their own patterns before the lesson.

The pattern is pinned or tacked to double material, Fig. 2, and the outline is drawn round in pencil. The pattern is removed and the shape stitched round, closely following the pencil line in forward and reverse tacking, with firm starting and finishing stitches, leaving the bottom edges free.

The shape is then cut out, leaving a good margin, and the bottom edges are separately turned up and tacked, Fig. 3. The shape is then turned right side out and filled with clipped stocking material or wood wool, using a pencil or skewer to prod out the curves, and moulding the shape with the left hand. Finally, the bottom is oversewn. Limbs may be added, and if legs are desired, the body is shortened, but generally the

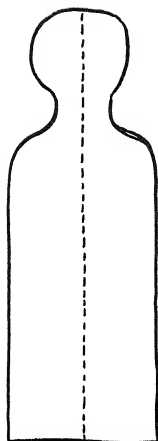
addition of arms alone makes the task long enough.

A complete stocking baby is shown in Fig. 4. The faces may be drawn or painted, or beads and buttons may be stitched on. Tufts of frayed wool, or dyed cotton wool may be stitched to the head as hair, but overlapping strips of stocking forms the most durable and attractive head covering.

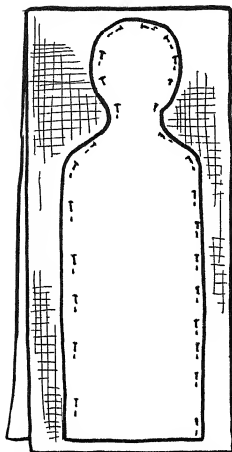
Fig. 5 shows four ways of dressing a stocking baby.

Box constructions and toys.—Among the handwork of the personal or individual type are included match-box and other box toys, often made for no other reason than "for the fun of it." This work perhaps appeals more to boys than to girls, though certain tasks, like making and equipping a shoe box to make their own Punch and Judy Show, or a street hawker's fruit or flower cart, or working at a model made from a shoe-box lid,—a cottage with fenced garden, an Indian encampment, etc.,—seem to attract both sexes, as also does the construction of a set of solid articles from match boxes to furnish a larger doll's house, or shop.

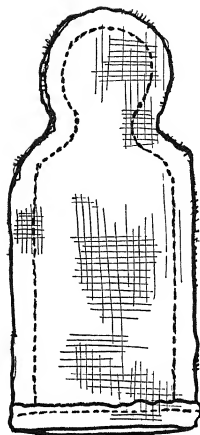
Match-box constructions can be simple or elaborate, and after children have performed a few graded exercises in which they learn to master certain tasks, such as the successful attachment of one box to another, and the art of covering, they are ready to work, with little instruction, from models provided by the teacher, to repeat old exercises without help; to follow simple written instructions and diagrams from the blackboard or work sheets, and lastly, to experiment and produce something for themselves. Among match-box toys, we can mention the little cart with or without cover or hood and having a double paper horse and driver, the perambulator, the railway carriage or little coal truck, the liner or dreadnought, the sentry box, the tiny cottage or shop, the church, the train, the 'bus, ambulance or motor car, the Punch and Judy Show, or more elaborate



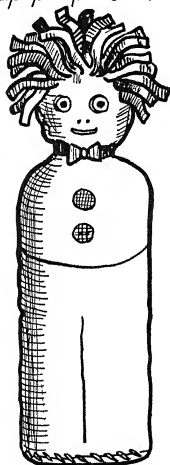
1. paper pattern



2. pattern pinned on material.



3. material sewn. and cut.



4. finished doll.



5. suggestions for dressing dolls.



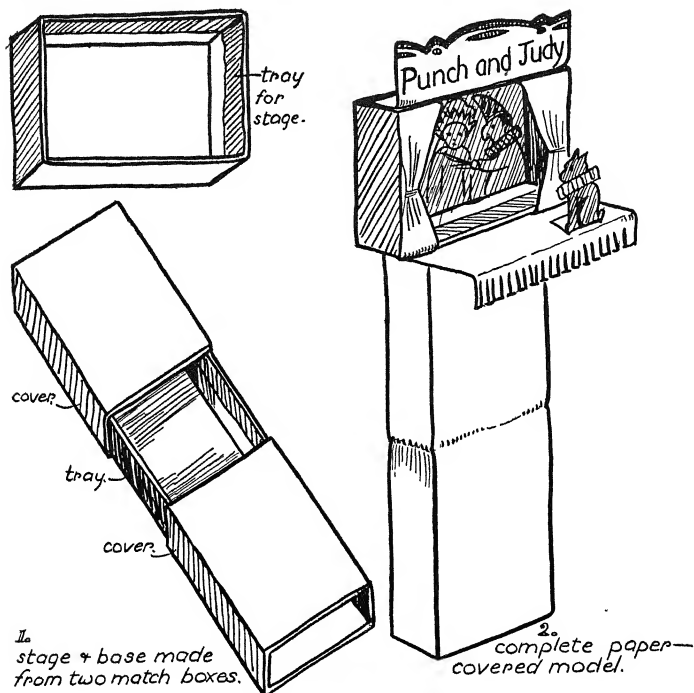


PLATE XLII PUNCH AND JUDY SHOW

constructions such as castles and forts. Among dolls' house furniture, armchairs, settees, dressers, tables, cradles, beds, stoves and fireplaces can be made from match boxes. Wall paper is perhaps the best medium for covering match-box toys, as its colour and even texture can be chosen to resemble that of the real article. It is unsatisfactory from every point of view to require children to cover with pastel a model that is frequently half dry and in

no condition to receive further immediate handling.

We sometimes find older members of this group happy to make simple games, their own sets of card dominoes, simple jigsaws, race or motor games, lotto boards, etc., each with a neat and attractive container in the shape of a covered box or strong paper packet, with a label of its contents and its owner's name. Such tasks call for simple measurement, as do the greeting

cards and other paper gifts that the children continue to make, though in a more elaborate and precise form than formerly.

PLATE XLII PUNCH AND JUDY SHOW—This model is made of two match boxes attached as shown in Fig. 1. One tray forms the stage, two covers, joined by a tray between them, make up the base. The base is covered with brown or wall paper. The stage is fitted with curtains and a platform of paper as shown in Fig. 2. A picture of Punch and Judy is stuck on the bottom of the tray on the inside and a cut-out of Toby is pasted upright on the paper platform. The two parts of the model are then stuck together to complete it.

PLATE XLIII. RACE GAME—This can be a boat or motor race game, as desired, and is best made for two players. First choose a board of suitable size, or a box lid without the rim, and cover it on one side with wall paper, turning down hems on the right side, Fig. 1. Measure a sheet of white paper to fit by drawing round the board. Fold or rule the paper into squares off and number the squares in order, beginning along one side and leaving a spare square at the start and finish, Fig. 2. Draw a river or racing track through the squares in their numbered order. Colour the playing course with crayon or paint, making the halves of the first and last squares off the two racing colours, e.g., yellow and red, as shown. Paste the playing course to the board and put it to rest under a weight till dry. Fig. 3 shows the completed playing board.

The pieces may be yachts, rowing boats, or motors, as shown. For two players, two similar pieces will be required, one coloured yellow and the other red. These shapes should be drawn on paper and coloured with the racing colours, and when dry pasted to a postcard or double paper. The shapes are then cut out and made to stand upright, either by means of a bent paper

clip, or by sticking the shapes to a $\frac{1}{4}$ in.-square block of strip wood.

A die, which can usually be procured ready-made, and a small box to throw it from, are all that is required to complete the game.

The rules, which should be carefully copied on a plain postcard, are as follows—

1 Pieces are chosen and placed at the starting point.

2 Each player takes it in turn to throw, and when six is thrown, that player may throw again, and advance the number of squares that his second throw has given him.

3 A six always entitles a player to a second throw.

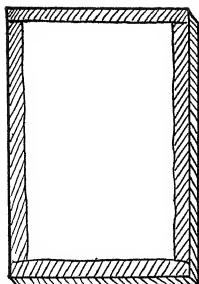
4 Players may pass, but never rest in the same square. If a player's throw brings his piece to a square already occupied, he must return to the starting point.

5 The winner is the first at the winning post.

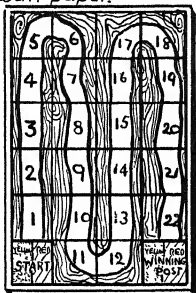
This game should be played in school upon at least one occasion.

Raffia and wool work.—This work, more particularly raffia work, presents many difficulties, and if the result is not to be extremely disappointing both to children and teacher, it necessitates such a state of dependence upon the teacher that in the end it ceases to be the children's work, so that one is tempted to say that its place is not in the infant school at all, except in dealing with a small group of abler children during the Christmas term, when gift-making projects are in progress.

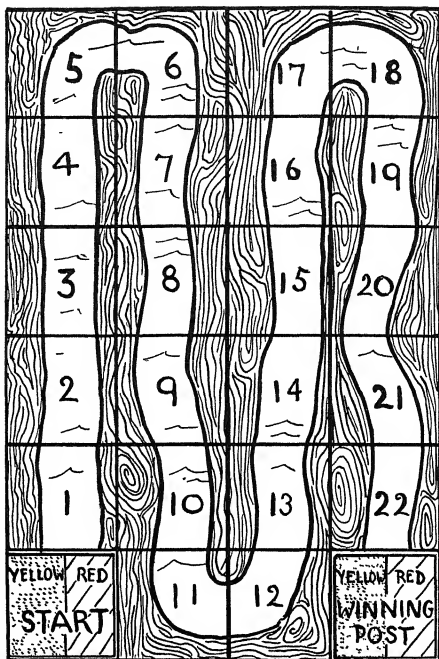
There is a stage in childhood in the lower junior school, between the ages of seven and eight, when firmer muscular control is developing. It is then that raffia work may be more wisely introduced, and even then, the work should be taken in the form of a succession of short tasks, and not of one long piece of work that continues throughout one or two terms,



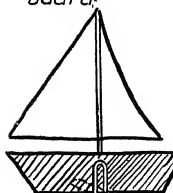
1. board backed with wall paper



3. complete playing board



2. playing course marked on paper the size of the board.



paper clip stand.



$\frac{1}{4}$ -square block of wood



4. alternative pieces for game.

and with which the child is bored after the first few weeks

Wool is a slightly different proposition, it presents fewer difficulties than does raffia, and it can be used for winding, cord making, plaiting, stitching and weaving. The colour of wool is a great joy, as is also the colour of raffia—indeed if raffia were to pass from the infant school, the only thing that we need regret would be the loss of the colour it supplies. Most teachers are familiar with all the forms that these little gifts in wool (or if they prefer it, raffia) can take; they entail much preparation on the part of the teacher and much supervision between lessons, if waste of time and disappointment are to be avoided. The latter half of the Christmas term might provide an opportunity for the Sevens to work with these materials, and a carefully graded set of small articles may be produced, from which they may choose to work two or three during the time at their disposal, this arrangement is better than providing larger tasks which afford no choice. It is only the ambition stirred by the sight of these gifts that may be made, and the slight competition ensuing, that keep such work alive in a large class. Without these inducements young children acquire that most fatal of all school habits, the habit of sitting and doing nothing, which leads to their becoming restless and naughty, and learning to dislike handwork.

TASKS FOR SPARE MOMENTS

Some children need a continuous and slightly sedative type of occupation, and it is a good plan, if the set handwork time does not allow for work of this kind, to provide the class gradually, as opportunity

occurs, or as they bring their own material, with "busy works" for spare moments, such as wet playtimes, or when they cannot get ahead with their next piece of work. For seven-year-old boys or girls, such tasks as the following are suitable—making bean or marble bags, knitting gay drill bands, kettle holders or rubbers, hats, scarves, and other garments for dolls, also simple weaving in wool to make small bags and purses. French knitting, crocheting, and plaiting can all be learnt incidentally in connection with these tasks, which when once started are the children's own responsibility, and may accompany them wherever they go.

To many teachers this recommendation may not seem worth while to follow, but if it provides the opportunity of a continuous responsible task for only a few children, if it shows them what can be achieved in spare moments, and reveals the satisfaction of work and concentration, and gives as well a sense of achievement, then surely it is a most desirable form of work. For though it sows the seeds of a harvest that is not reaped in the infant school, it is our privilege to be more than teachers and guides, we are foundation builders of character.

The task of providing handwork for young children is an arduous one, but it has always this reward, that it becomes vitally interesting and all absorbing because of the thought and attention it demands, and the children's power and imagination increase with the effort. Further, it provides us with the surest clues to our children's ways of thinking and working. Probably the most valuable of all the training that the best infant school aims to provide for its children, arises directly or indirectly from the handwork periods.



CENTRE OF INTEREST—HOLIDAYS IN THE COUNTRY

XXVIII. CAMPING IN THE COUNTRY



THE WOLF CUBS' HOLIDAY

Drawing in Outline of Picture No 33 in the Portfolio

Introduction.—All children love picnics, and even if they have not shared in the joys of holiday camps, they will appreciate the picture and join in the conversations about various creatures seen by campers in the woods and fields. In this section, *Holidays in the Country*, are nature talks and stories on leaf shapes, creatures which live in the soil, little beasts, and a blackbird's nest. For a complete list of the nature talks and stories contained in these volumes the teacher should consult the *Index* at the end of *Volume IV*.

Description of Picture No. 33.—Children in infant schools, although too young themselves to be Wolf Cubs or Brownies, will no doubt have heard of them from older brothers and sisters. Wolf Cubs is the name given to the preparatory class of Boy Scouts, and includes boys from eight to eleven years of age. Brownies are girls of the same class and age in the Girl Guides. One of the activities of all Scouts and Guides is camping.

The picture shows two Wolf Cubs camping in a wood. They wear the usual Cub uniform. They are engaged in heating water in a camp kettle, or "billy," over a camp fire. The "billy" is hung from a support made of three green sticks. The fire is made of dry twigs, and a further supply of twigs has been collected as fuel. On the ground lie some plates and two mugs in readiness for the meal. Near by the tent is pitched, in which the boys sleep. In a corner of the tent can be seen a roll of blankets. A woodpecker is busy tapping for insects on the trunk of a tree.

The frieze for the classroom wall is made up of wild rabbits—one sitting up and two crouching. Drawings in outline for tracing these figures are given on pages 1058 and 1059. One third of the children will require whole sheets of drawing paper with tracings of the upright rabbit. Another third will need half sheets with tracings of the crouching rabbit, while the remainder will have half sheets with tracings of the crouching rabbit facing the opposite way.

LANGUAGE AND SPEECH TRAINING

Conversation on Picture No. 33.—The children should describe and discuss the picture. To stimulate thought and observation, and to bring to the children's notice any points overlooked, the teacher may make some of the following suggestions—
1. How are these little boys spending their holidays? 2. Why are they called *Wolf Cubs*? (Explain.) 3. Tell how the boys are dressed. 4. Tell what place they are in. 5. Tell how the boys have made their fire. 6. Tell what the pile of twigs by the tree is for. 7. Tell what the boy by the tree is doing. 8. Tell how they have made a pole to hang their can on. This can is called a "billy." 9. Tell what the squatting boy is doing. 10. Tell what may be in the "billy."

11. Tell what the plates and cups are for. 12. Tell where the boys will sleep. 13. Tell what you think is in the bundles at the corner of the tent. 14. Tell what you see in the border under the picture. 15. Tell the name of the bird on the tree trunk. 16. What is the woodpecker doing?

During the conversation the leading words may be put on the blackboard; e.g., camp, Wolf Cubs, cap, necktie, jersey, socks, garters, wood, fire, twigs, pole, can, "billy," meal, tent, blanket, rabbit.

The older children may copy these words into a book as a writing exercise, and the more familiar of them may be learnt as an exercise in spelling.

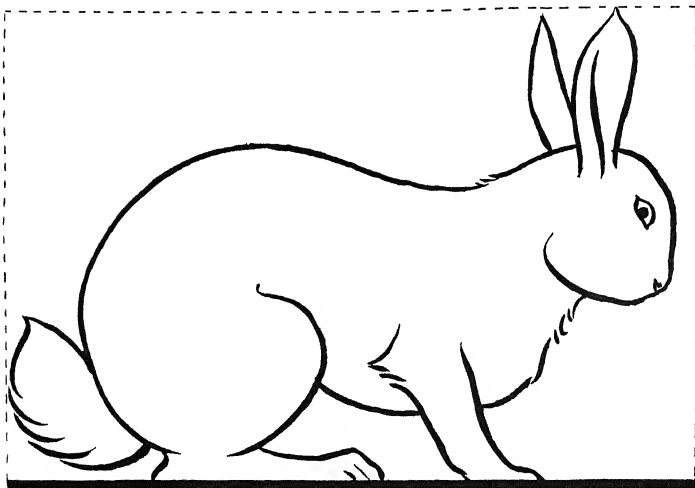
Missing words.—Say or write on cards such sentences as the following for the children to supply the missing words —

1. The boys are called Wolf — (*Cubs*)
2. The boys are camping in a — (*wood*).
3. They will sleep in the — (*tent*)
4. The boys have lit a — (*fire*)
5. They have hung a — (*can*) over the fire
- 6 They call their can a "—" (*"billy"*).
7. The can hangs on a — (*pole*).
8. In the border under the picture are some — (*rabbits*).

- 9 The bird on the tree trunk is a — (*woodpecker*)

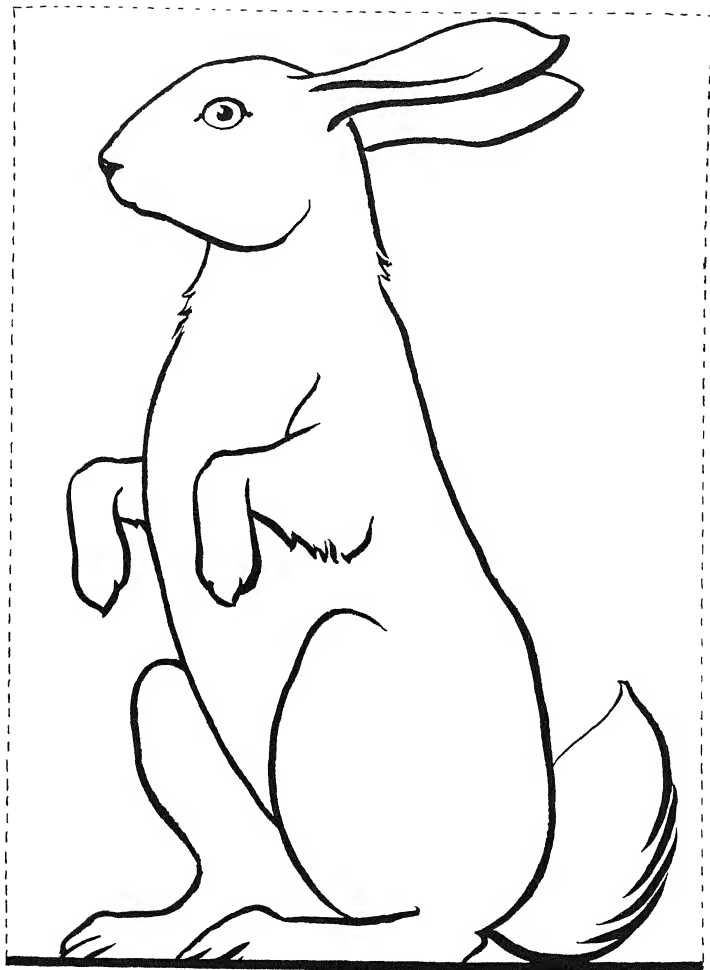
Missing words.—Say or write on cards such sentences as the following for the children to supply the missing colour-words —

1. The boys wear — (*green*) caps with — (*yellow*) stripes
2. The plates and cups are — (*blue*)
3. The can is — (*black*).
4. The rabbits are — (*brown*)
- 5 The woodpecker has a — (*red*) head.
- 6 The woodpecker's wings are — (*green*).



TRACE-OUT FOR FRIEZE—RABBIT CROUCHING

Trace this Drawing for part of the Frieze, Picture No 33



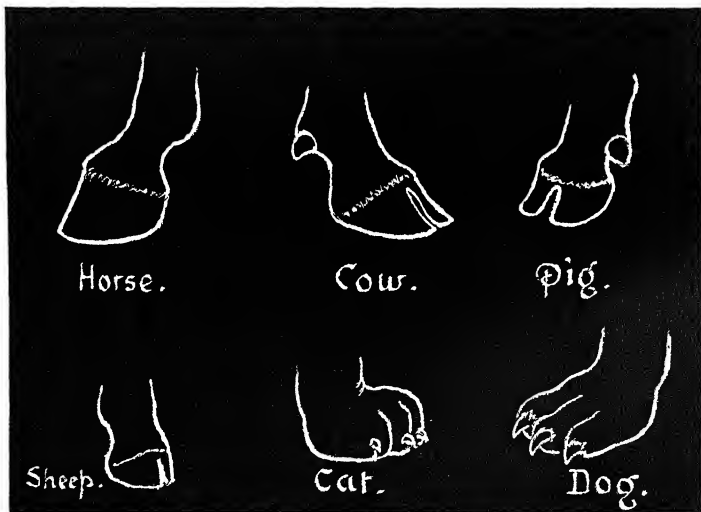
TRACE-OUT FOR FRIEZE—RABBIT SITTING UP
Trace this Drawing for part of the Frieze, Picture No 33

BLACKBOARD DRAWINGS

FET OF ANIMALS

Draw the accompanying sketches on the blackboard and let the children tell to which animal each belongs. If the children are unable to distinguish any of the animals, let them look through the coloured plates until they are successful. The children will have little difficulty in understanding why the feet of animals are all so different. The hard hoof of the horse is necessary for running on hard roads; the hoofs of

the cow, pig and sheep are cloven, for these animals walk about in soft grassy meadows; the cat's paw is adapted for silent walking, the dog's for scratching holes and running. The teacher might make drawings on cardboard to a large scale and use the cards for practice in "snapshot drawing". Exhibit each card in turn for about a minute. When the children have completed their drawings let them compare their results with the drawings on the cards.



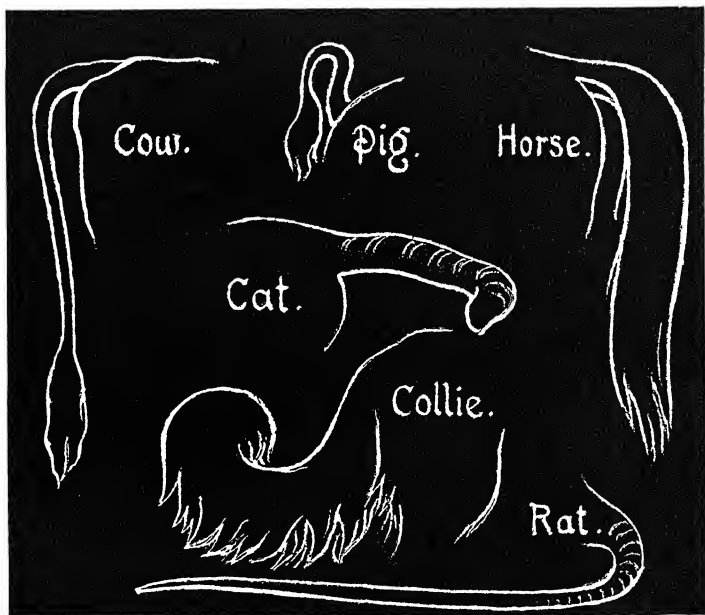
FET OF ANIMALS

BLACKBOARD DRAWINGS

TAILS OF ANIMALS

Draw the accompanying sketches on the blackboard and let the children tell to which animal each belongs. If the children are unable to distinguish any of the animals, let them look through the coloured plates until they are successful. Following the

discovery of the animals the children might draw them. They can then talk about any observations they have made of the way in which animals use their tails. The children might afterwards be encouraged to draw from pictures the tails of wild animals such as those of the lion, tiger, elephant, etc.



TAILS OF DOMESTIC ANIMALS

ACTIVITIES AND CONSTRUCTIVE WORK

Game—"Just Like That."—Before playing the game, cards must be made bearing the names of the principal objects and creatures mentioned in the following story. The names can be written on the blackboard and each child, as directed by the teacher, can copy one on a piece of card. The numbers of the different objects mentioned must of course be adjusted so that every child has a name to write. The cards are then collected, mixed, and given out again. In this way every child is given a part and all have contributed to the making of the game. The cards can be afterwards collected and used on subsequent occasions. The teacher reads the story over to the class and explains that when she says the words "JUST LIKE THAT," the child holding the card with the name of the thing referred to, must do the action or make the sound told in the story. In the story given below, the names given to the children and the things they must do are printed in italics.

Story—The *Clock had just struck two*—JUST LIKE THAT—when the *Mouse began to squeak*—JUST LIKE THAT. Of course that happens very often at night, especially when Mrs. Mouse has a large family and very little food. No wonder the poor things squeak. Then before one could say "Knife!" or "Jack Robinson!" or "Good Gracious!" or anything of that kind, strange things began to happen. The *Arm Chairs* started it, they *walked round the room arm in arm*—JUST LIKE THAT. Then the four *Dining Chairs* left their places at the table and *chased each other round the room*—JUST LIKE THAT—and the *Table danced a jig*—JUST LIKE THAT. But when the *Settee galloped round the room like a race-horse*—JUST LIKE THAT—a big *Pouffe who was sitting on the floor*—JUST LIKE THAT—

nearly burst his sides with laughing—JUST LIKE THAT. Presently a pair of *Ornaments on the mantelpiece changed places with each other*—JUST LIKE THAT—and the *Pictures on the wall jumped up and down three times*—JUST LIKE THAT. Suddenly when everyone was wondering what would happen next a *Pocket Hanky*, that had been dropped on the floor by someone before going to bed, *sneezed*—JUST LIKE THAT—to let everyone know she was there. A little *Stool* close by her got such a fright that she *hopped about on one leg*—JUST LIKE THAT. Outside in the garden the *Dog barked*—JUST LIKE THAT—and said in a growling sort of voice, "It's a queer night to-night. I seem to hear funny noises. I believe there's magic in the air." The *Cats* on the garden wall *called to each other*—JUST LIKE THAT—and said, "Something queer is going on in the house. Let us go to the window and peep in." But the *Dog growled* at them—JUST LIKE THAT—and they hurried back to the wall.

There they sat watching and waiting, and presently they saw the tinnest little pixie slipping out through the keyhole. He was laughing a merry little laugh and as he passed he chuckled to himself, "Such fun! Such fun! I have enjoyed myself to-night—those armchairs and that old settee—Oh! Oh! Oh!" and he laughed till his sides ached. "I must hurry now," he went on, "or the dawn will be here and I shall get into trouble with the early bird." Off he sped and then everything went on as usual.

The *Early Birds twittered*—JUST LIKE THAT—the *Cocks crowed*—JUST LIKE THAT—the *Hens clucked*—JUST LIKE THAT—the *Ducks quacked*—JUST LIKE THAT—the *Cows lowed*—JUST LIKE THAT—the *Sheep called to their lambs*—JUST LIKE THAT—and the *Lambs*

answered—JUST LIKE THAT. The Clock on the mantelpiece struck six—JUST LIKE THAT—and another working day began.

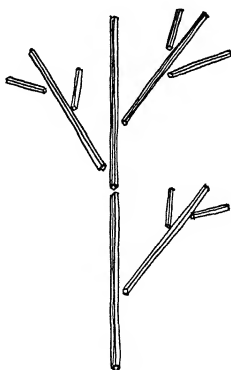
Game—"Squirrels and Nuts."—The children are divided into two equal groups, the Squirrels and the Nuts. One child, or the teacher, is the Wind. The Nuts sit on a form while the Squirrels stand in a line some distance away.

The Wind runs by the Nuts, blowing on each one. As each Nut is blown upon, he gets off the form and begins to hop about the floor. A Nut is *out* if he puts two feet on the floor.

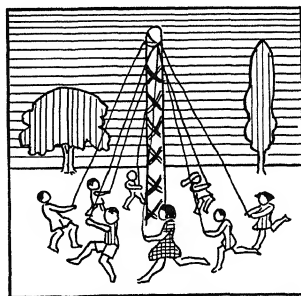
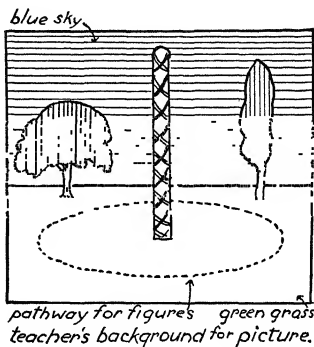
When the Wind begins to blow the Squirrels start to jump forward, keeping their feet together. Each Squirrel continues to jump till he has caught one of the hopping Nuts and taken him back to his line. The game goes on until all the Nuts are caught.

The children then change sides and the game is repeated.

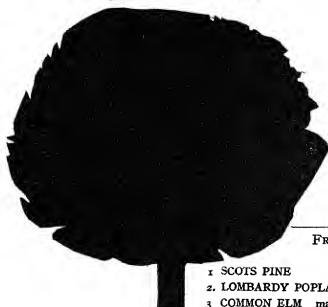
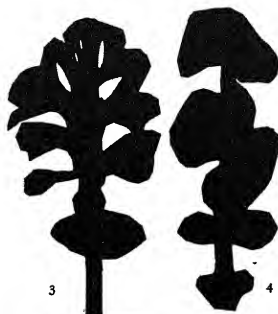
Stick laying—nest, tree, etc.—The Fives can make pictures with sticks of a nest, a bird, a flock of birds and a tree, the last of which is shown in the sketch.



Paper picture—maypole scene.—This is an exercise in which any number of children of any age can take part. On a large sheet of wall paper the teacher prepares the background with coloured chalks, or rag dipped in water colour, lightly indicating blue sky and green grass. Cut out a maypole from paper of a contrasting colour, and paste it upright in the middle of the picture. Add coloured bands round the maypole with chalk or paint.



picture of maypole with cut-out figures.



Now draw as large an ellipse as possible round the base of the maypole, using colour of a darker green than the grass. This marks the path of the figures dancing round.

The children supply the figures for the maypole scene. These may be printed figures cut out from magazines, or hectographed figures coloured by the children, or paper figures drawn and cut out by themselves. The children come up and paste their figures on the darker green pathway round the maypole, placing the smaller figures at the back. All the figures should show movement—hopping, running, dancing, etc.

Finally, the teacher adds the streamers of different colours in paint or chalk.

Paper cutting—tree shapes in summer.—

Let the children draw or cut out the shape of the tree. They might first draw a faint line to represent the space occupied by the crown, then draw the outline of the trunk, also faintly, and afterwards attempt to show the main outlines of the masses of foliage and the branching as far as it can be seen, noting any gaps where light shows through. In the case of the Common Elm and a few other trees with a massive appearance and a 'clean-cut' silhouette due to heavy foliage, it is worth while to let the children first of all attempt to cut out a representation of the tree in black paper. This should be done quite freely without drawing any outline. Such free cutting often results in much better proportions than if drawing is attempted at first, although drawings should be made subsequently. If the study is made in the autumn the foliage is already getting thinner, and then this method of free cutting is not so good as drawing.

FREE PAPER CUTTING—TREES WITH DENSE SUMMER FOLIAGE

1. SCOTS PINE

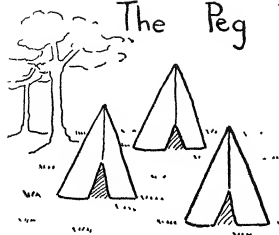
2. LOMBARDY POPLAR.

3. COMMON ELM mature tree.

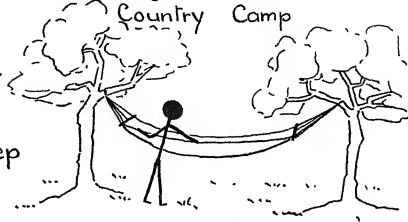
4. COMMON ELM much older tree showing gaps caused by fall of branches, and bushy outgrowth at base.

5. HORSE CHESTNUT

The Peg Family at a Country Camp. I



Here are the tents for
the Peg Family's
Country Camp

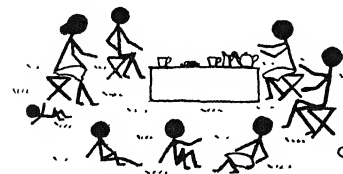


Jim likes to sleep
in a hammock
slung under
the trees.



Jim makes a wood fire to
boil the kettle, while Jane
cooks the bacon on a
little stove.

Dick, Dot and Peter gather
sticks for the fire.



They have a big box
for a table, and camp
stools to sit on. The
children sit on the grass.

The Country Camp II



Jim took Dick and Peter
for a walk through the
fields.

Dick crept quite close
to some wild rabbits
He wished they



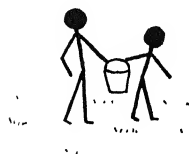
were tame like his pets at home.



Peter saw a squirrel among
the trees.



They saw a fox near
the wood.



When they got back to camp,
Dick and Jim went to the
farm for a bucket of water.

The Country Camp. III



Father likes to go fishing.
He caught some fish for
their supper

Baby Betty lies on a
rug in the sunshine.

She tries to catch the
butterflies that fly near her.



After dinner, Jim plays
a game of rounders
with the children.

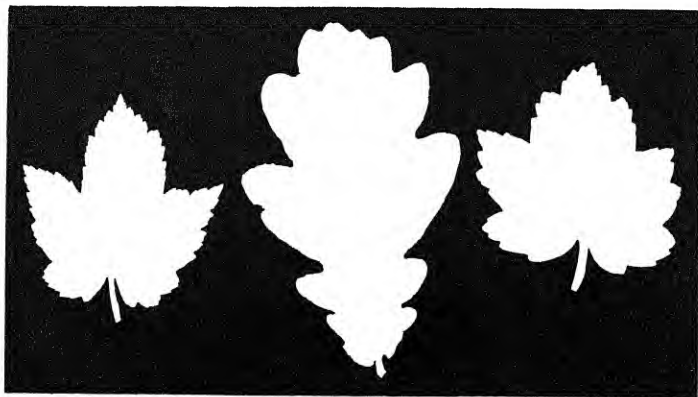
Jane and Dot found
a birds' nest, but they
did not go near to
scare



At night they all sit round
the camp fire and
sing before they
go to bed

NATURE STUDY AND TALKS

LEAF SHAPES



SYCAMORE

OAK

SYCAMORE

Collecting and sorting leaves.—The study of leaf shapes may take place either in summer or in early autumn, if preferred it may be combined with observations on the autumnal changes in the colour of leaves. The aim of the study is to help children to recognise and remember the leaves of different trees by drawing attention to characteristics of shape, and by grouping together similar shapes.

The children should bring to school sprays of leaves and separate leaves of many different kinds. These may be collected in dress boxes or set out on a nature table.

First, a large sheet of dark paper is pinned on the blackboard. The children are then asked to pick out and name all the leaves

they know. As each kind of leaf is chosen, it may be lightly stuck on the dark paper by means of paste and the name printed in chalk underneath.

The class will then be divided into as many teams as there are kinds of leaves. A member from each team will make a large label with the name of that particular leaf upon it, and place it in some convenient spot in the classroom. The other members of the team will sort out the other leaves of this kind and collect them.

The work already described may constitute the first lesson on leaf shapes. During the days which follow, before the next lesson, each team can continue to collect its particular kind of leaf out-of-doors. In

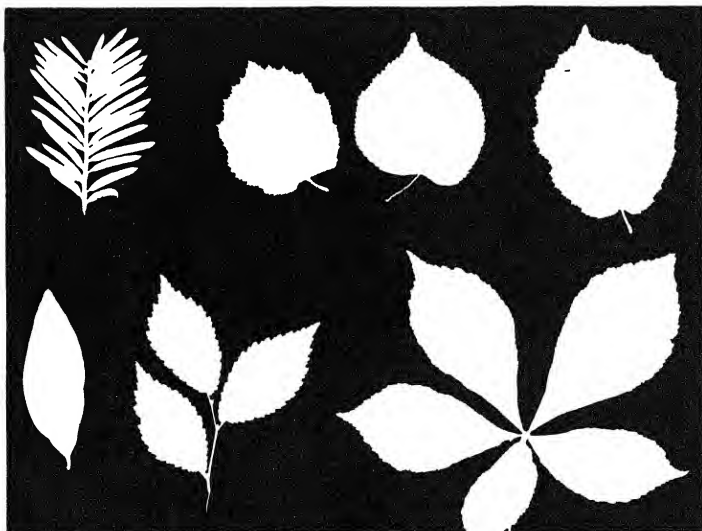
this case each team will need a box in the classroom with the label attached. The wall chart with the specimens and names of the leaves should be on exhibition during this period of leaf study.

Grouping shapes.—At the second lesson the stores of leaves are shown by the different teams. The teacher then chooses one leaf from among the store and asks certain children in turn to bring a leaf of another kind, which somewhat resembles the first in shape. Another sheet of paper is set up by the wall chart and leaves of similar shapes are lightly stuck under one another in a row, with their names written beside them. About seven groups of leaves can be made in this way, as follows —

I	II.	III
Elm	Sycamore	Ash
Beech	Maple	Mountain Ash
Hornbeam	Plane	Walnut
Hazel	Wayfaring Tree	Elder
Birch	Hawthorn	
Alder		

IV.	V.	VI.	VII.
Lime	Horse Chestnut	Willow	Oak
Black Poplar	Laburnum		

If the leaves are only lightly attached, they can be pulled off if subsequently it is decided that they should belong to another group.



Top line.
Bottom line

YEW
CRACK WILLOW

BIRCH
ELM

LIME HAZEL
HORSE CHESTNUT

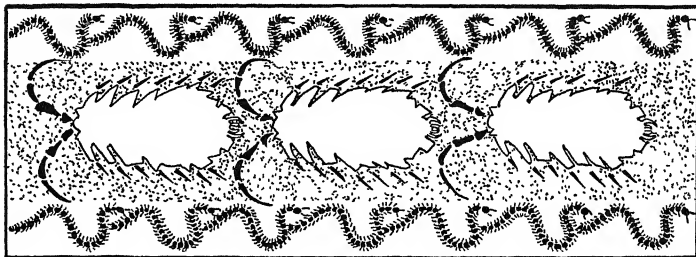
Leaf prints.—This is a fascinating occupation which will cause great interest and excitement in the classroom. Obtain some packets of self-toning paper of varying sizes which will suit all sizes of leaves. If possible, provide some photographic printing frames, but if these are unobtainable a fairly large sheet of glass and a board the same size, or larger, will do. Let certain children each choose a leaf or leaves which will lie conveniently on the size of toning paper chosen. Lay the board on a table by a window. Place the toning papers with the shiny side up on the board, quickly lay the leaves upon them, then carefully place the glass

over the top. By experiment the teacher will find the correct time to expose the paper, as this rough and ready frame does not admit of the prints being looked at during the process.

When the prints are ready the teacher may develop them in "hypo" which is cheaply and easily obtained.

Paper cutting and drawing.—The children may select leaves which attract them, and either draw, colour or cut them out in paper. The cut-outs should be mounted, and in every case the name of the leaf should be written below by reference to the wall chart.

CREATURES WHICH LIVE IN THE SOIL

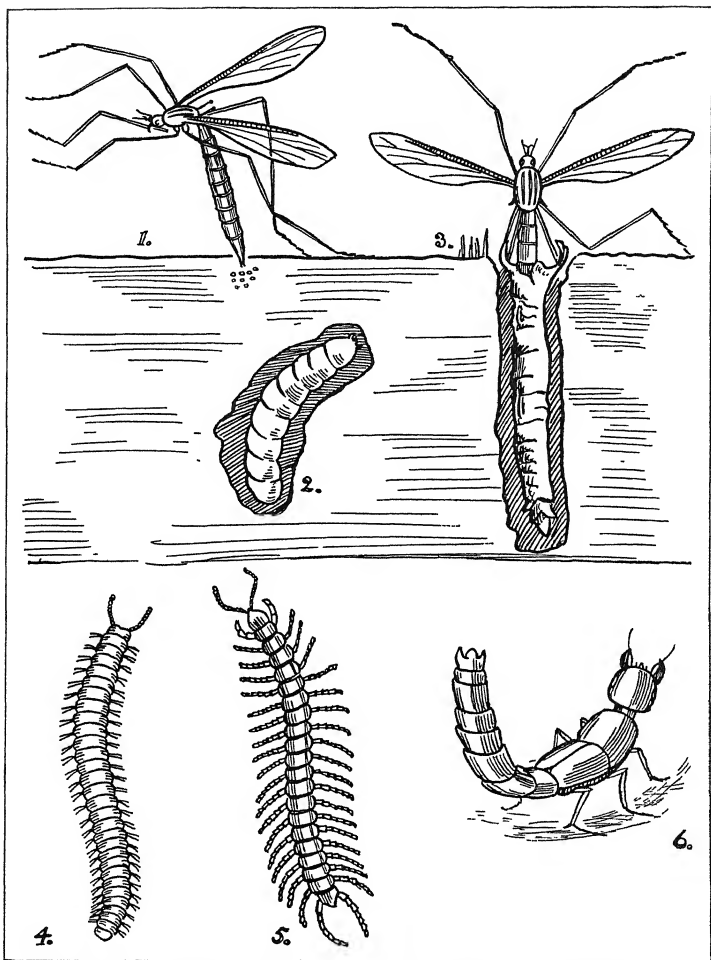


Providing a "home."—In schools which possess a garden in which the children are accustomed to work, it will be an interesting and easy matter to find and collect for observation creatures which live in the soil. The best time for these observations is in the autumn, when the ground is being dug and cleared, and perennials are lifted and divided. Failing a school garden, most children will have access to a garden at home or to an allotment.

A simple "home" for such creatures consists of a shallow earthenware saucer, containing a little damp soil covered with dead leaves, and a few bits of decaying, moist bark to act as hiding places and to

keep the soil moist. The whole is covered by a glass plate, or by a tumbler if the contents are very small. This needs to be raised occasionally, say once or twice a day, to admit air, or the soil will soon be overgrown by moulds. This plan of providing a "home" is suitable for woodlice, millipedes, centipedes, ground beetles and tiger beetles and leatherjackets—substituting small grass tufts for the last. Carnivorous creatures will need feeding. The chief points in connection with the "home" are firstly, that it shall easily be kept moist without drowning the creatures, and secondly, that it shall be easily observed. (See page 1153.)

When specimens are brought from home



1. FEMALE DADDY LONGLEGS LAYING EGGS 2 LARVA OF DADDY LONGLEGS (LEATHER JACKET)
 3. DADDY LONGLEGS EMERGING FROM PUPA CASE 4 MILLIPEDE 5 CENTIPEDE 6 DEVIL'S
 COACH HORSE (COCKTAIL BEETLE).

the teacher should insist that the creatures must be carefully handled and carried in a comfortable condition. Small cardboard boxes, such as cigarette boxes, are suitable for transporting the creatures to school. A few pinholes should be made in the lid of the box and some earth put in. The creature may then be picked up with a spoon and put in the box, which must be tied up with string, to prevent the possibility of its escape in the house. With little children the teacher herself may choose and collect the specimens.

The following are the commonest creatures which are likely to be found, and which may be kept for observation in the "home"—

Ground Beetles.—These are carnivorous beetles which have almost completely lost the power of flight. They have very strong legs. They are found running about on the surface amongst grass or in neglected ground. They have simple feelers. Many of them are also brightly coloured. During the day they often hide under stones, feeding at night.

Devil's Coach Horse (Cocktail Beetle).—This might not be recognised as a beetle at first sight. It is slender, about 1 in long, dull sooty black in colour, and runs along with its abdomen curved upward and its large jaws extended. It has a pair of very short, horny wing cases. It is also carnivorous. Its larva lives underground.

Cockchafer.—The imago or adult beetle lives amongst trees, ravaging the leaves. It is a nut-brown, broadly-built insect about the size of a large bumble-bee, characterised by short feelers spread out in a fan made up of a number of narrow plates (seven in male, six in female), comblike in effect. The larva is a fat white grub with a brown head and clearly marked breathing pores on each segment. The gardener frequently finds one curled up in a little chamber which it has excavated in the



soil. It has developed from one of a group of ten to fifteen eggs laid in the soil in May or June. It feeds chiefly on the roots of plants, so this beetle also is injurious in the garden, while the carnivorous beetles are helpful. The larva of the cockchafer remains for two years in the ground, passing into a passive stage, then splitting its skin and emerging as a perfect insect, which spends yet another year in the ground before coming into the light. In April or May of the third year these beetles emerge, often in swarms, so that, with their buzzing noise and heavy flight, they may at first sight be taken for a swarm of large bees. They blunder about, attacking lime and other trees and stripping them of their foliage; they live for about six weeks and then lay their eggs and die. Their long life underground is an explanation of the fact that in certain localities they may be very numerous during one summer, but may not be seen again for three years. They are also known as May Bugs, June Bugs and Bumbledors.

Earwigs.—These belong to a different group of insects, the group name of which means *straightwinged*. They are related to the crickets, cockroaches and grasshoppers. Everyone knows their horny, slim, dark brown bodies with the strongly developed but apparently harmless pincers on the last segment, nearly straight in the female, larger and more curved in the male. They have two pairs of wings, the second pair large and thin, folded under the first, which are quite small. If a dead insect is pinned on to a cork mat the beautiful folded wings

can easily be spread out and examined. The eggs are laid in grass just below the ground. On one occasion some years ago when a turf was pulled up, a beautiful little shallow basin was disclosed, lined with finely powdered earth. It was about an inch across. Inside it was a mother earwig, with two small, pale replicas of herself running at her heels, and lying in the nest were two eggs like seed pearls. In this case development is direct, for the young stages do not differ structurally or in their mode of life from the adult, and therefore they are not larvae. The males apparently die in the autumn, but the females may live till the next spring, occasionally being found in crevices during the winter. Miss Lulham says they live "blameless lives," doing very little harm to the flowers, whose sweet juices they suck, but living chiefly on decayed vegetation. There is, as far as is known, no record of their entering the human ear, though this is a common superstition; probably the cruel-looking nippers serve to give the insect a bad reputation.

Leatherjackets.—These are the larvae of the Crane Fly or Daddy Longlegs. The eggs are laid in grass or cornfields, and the larvae spend the whole of their lives feeding on roots and decaying vegetation, so that often large areas are badly infested and crops are injured. They grow to about an inch in length, are a greyish earth colour, with a tough, leathery, wrinkled skin rather indistinctly segmented. The head is usually withdrawn into the first segment, but it can be pressed out gently and examined. With a hand lens two pairs of toothed jaws and a pair of very short feelers can be distinguished. The Leatherjacket breathes by means of two pores on the last segment. The value of this device (frequently found in the larvae of flies) will be realised, when it is remembered that the creature spends its life burrowing in the soil, and the last segment is the only part of the body exposed to a stream of fresh air. These openings (too small to be seen unless a very strong

lens is available) are surrounded by several stiff projections and soft, fleshy lobes. The head end with the head withdrawn has the shape of a horseshoe.

The adult Daddy Longlegs with its slender, dark grey body, humped thorax and long, thin legs, is known to everyone. A pair of slender projections ending in a knob, stand out just behind the wings. They are not feelers of any kind, but represent the second pair of wings which has disappeared. The long simple feelers project from the head. The end of the body in the male is thick and blunt, in the female pointed for egg laying (as in many moths).

The eggs are laid in grass, pushed just below the surface and hatched there. Two broods emerge in one summer, the second hibernating as larvae.

Millipedes and centipedes.—These creatures are allied to the insects by their jointed structure and method of breathing by means of a system of tubes penetrating the body, with pores at the surface; but they differ from them in having many legs instead of only three pairs. The Millipedes are vegetable feeders, and therefore injurious in gardens. The Centipedes are carnivorous, feeding upon earthworms, slugs and grubs of all kinds, and are therefore, on the whole, serviceable. The Centipedes have a flat, jointed body, provided with one pair of legs on the sides of each segment, while the Millipedes have a more cylindrical, wormlike body, and the legs are branched so that there appear to be two pairs on each segment, nearer the under surface. In the young Millipedes the number of legs is incomplete.

One of the commonest Centipedes is *Lithobius*, a fierce-looking creature 1 in to 1½ in. long, dark, glossy brown in colour, with long antennae, almost square segments and strong-looking legs. It is found especially in garden rubbish heaps, or where earthworms congregate. It runs very swiftly. The body has fifteen segments. *Geophilus* is another common Centipede—at any rate

in the south of England. It is sometimes called a wireworm. It is long, thin and straw coloured, and may have over one hundred pairs of legs.

The commonest Millipede, *Julus*, is a glossy black creature with very short segments, about thirty in all. A full-grown one is about 2 in. long. It coils up when disturbed.

Woodlice.—The Woodlice (Sourhogs, Pill-lice, Slaters) belong to a group which are chiefly water dwellers, and are distant relations of the shrimps, lobsters and crabs. They are imperfectly adapted for a land existence, must always keep to damp situations, and breathe by means of gills or thin plates attached to the legs close underneath the body. These gills must be kept moist, though there is a rudimentary system of tubes something like those of insects to assist them in breathing. The body is flattened from above, having a broad oval form. It is covered by a series of beautifully-fitting overlapping plates hinged together. There are many distinct kinds. In some species the armour plates can be closed up into a ball or "pill" when touched (the "pill" woodlice). The young, tiny white creatures, are carried attached to the underside of the mother's body.

The creatures can be examined in their "homes" by small groups or by individuals, and what is found is largely dependent on chance. Yet it can be one of the most interesting investigations. Attempts should be made to keep the various creatures alive under natural conditions, and to breed them or watch the stages in their life histories. A good deal can be made out with a hand lens. Their methods of movement in particular may be watched and compared, especially the way they make a burrow or move inside it. The position they naturally occupy should be noticed.

In addition to the creatures indicated, many other forms of life will doubtless appear from time to time, e.g., other fly larvae, eggs of snails and slugs, cocoons

of earthworms, possibly hibernating frogs, toads or newts, caterpillars which burrow in soil either for the winter or to pupate.

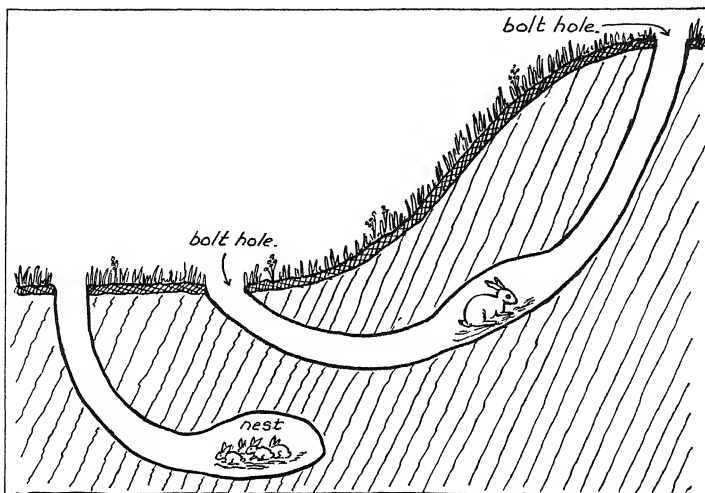
Kate Harvey

LITTLE BEASTIES

The Wild Rabbit.—Rabbits live in holes called burrows, many burrows together make a warren. Rabbits are timid creatures and have many enemies watching for a chance to kill them for food. Large birds, foxes, weasels, stoats, as well as the farmer all kill and eat the rabbit. However, the rabbit manages to escape many of his enemies by the clever way in which he arranges his burrow. With his powerful claws he burrows into the ground, making a tunnel, which communicates with the surface of the ground by another hole some distance from the first. When a stoat or some other enemy makes its way down one hole, the rabbit promptly bolts to the open by the other hole. The rabbit, too, has sharp eyes and keen scent, he is quick to hear the slightest sound, and his long hind legs enable him to run swiftly.

It is not easy to see a rabbit when he does not want to be seen, for the colour of his fur matches the places where he lives and runs about. If danger threatens, an old rabbit will knock on the ground with its hind feet to warn all the rest. As the old rabbit leaps quickly along to safety the white on his tail shows up plainly, and the young ones follow the white tuft. Except the underside of the tail, the rest of the rabbit's fur is brown. Sometimes a frightened rabbit does not run away but crouches close to the ground, when even men and dogs on the lookout for him will easily pass him by.

Rabbits when they become too numerous are a pest to the farmer. They breed rapidly and if they had not many enemies they would soon overrun the countryside. The food of the rabbit is many kinds of green vegetables and plants. On a farm or in a



PLAN OF RABBIT'S BURROW

STOAT

garden rabbits do much damage to growing crops of lettuce, cabbage, carrot, and such plants. Clover is food that the rabbit loves, and if possible rabbits make burrows near a clover field. Much harm is done by rabbits to young trees by gnawing the tender bark. The rabbit is a rodent or gnawing animal, its long front teeth are shaped like chisels, and its back teeth easily grind up the pieces of bark. The only way to keep rabbits from doing mischief is to surround the trees with wire netting partially sunk into the ground.

The young are born in a short, blind burrow or "stop" at the bottom of which the buck and the doe prepare a cosy nest lined with dry grass. The young are born blind and naked, the doe suckles them and they rapidly develop. When the parents leave the home in search of food they cover the entrance to the stop with leaves and earth. In spite of this precaution, however, a fox frequently scents the young rabbits and quickly digs down and devours the helpless young. (For Blackboard Drawings of the rabbit see *Volume II*, page 498.)

The Squirrel.—This long poem is too difficult for young children to learn. It is, however, a useful poem for the teacher to recite to the children, for it relates a number of facts about the habits of squirrels. "The pretty red squirrel" is not now very common, the grey squirrel, a bigger and stronger animal, is gradually destroying it. There is a picture of the red squirrel in the *Class Picture*, No. 34, and a trace-out of the squirrel on page 1110.

The pretty red Squirrel lives up in a tree,
A little blithe creature as ever can be,
He dwells in the boughs where the stock-
dove broods,
Far in the shades of the green summer
woods,
His food is the young juicy cones of the
pine,
And the milky beech-nut is his bread and
his wine

In the joy of his nature he frisks with a
bound
To the topmost twigs, and then down to
the ground,
Then up again like a wingéd thing,
And from tree to tree with a vaulting
spring,
Then he sits up aloft, and looks waggish
and queer,
As if he would say, "Ay, follow me
here!"
And then he grows pettish, and stamps his
foot,
And then independently cracks his nut!
And thus he lives the long summer through,
Without a care or a thought of sorrow
But, small as he is, he knows he may
want,
In the bleak winter weather, when food is
scant
So he finds a hole in an old tree's core,
And there makes his nest and lays up his
store,
Then when cold winter comes and the trees
are bare,
When the white snow is falling and keen is
the air,
He heeds it not, as he sits by himself
In his warm little nest, with his nuts on his
shelf.
O wise little squirrel! no wonder that he,
In the green summer woods, is as blithe as
can be!

Mary Howitt

The Ferret.—The ferret is a domesticated variety of the polecat, allied to the stoat (see illustration, page 1075), and the weasel. It is smaller and slimmer than the polecat and is frequently an albino with yellowish-white fur and pink eyes, though a brown breed does occur. It has a slender body about 14 in. long and a bushy tail of 5½ in. The nose is pointed and sensitive and the eyes round and bright.

The ferret is kept for catching rabbits, but it is seldom fully domesticated, for it entertains little affection for its owner and is always liable to bite. It should be handled

cautiously, grasping it just behind the shoulders

In hunting rabbits the ferret is usually first muzzled, or it will kill a rabbit, gorge itself and then go to sleep in the burrow. The ferret is put down one of the holes of a rabbit warren, the other holes being previously closed with nets. The rabbits, as soon as they discover the presence of the enemy, bolt from their holes and are caught in the nets.

The Mole.—The mole is an insect-eating animal that does much useful work in the soil, feeding entirely on worms, grubs and insects. Unfortunately, its habit of raising mole casts and the damage caused by its burrowing in newly-sown seed cause many people to set traps for it.

The mole is about 6 in. long, covered with velvety, greyish-black fur. The hairs of the fur are set vertically so that they will lie in any direction, which is a great advantage to the animal when burrowing. The body is rounded, the forelimbs are very short with strong claws which act as paddles in digging. Its nose is pointed, there are no ears showing, and the eyes are small, with dim sight.

The mole spends almost all its time underground, burrowing in search of food. It casts up small heaps of earth on the surface, which must not be confused with the larger mole hills covering the nesting place, which is usually built in an open field. One large nest chamber is hollowed out just below the surface, and lined with grass and leaves. Several galleries and tunnels often lead from the central chamber. The whole forms a large dome-shaped structure from the outside, and is always found near a water supply. The young ones are born, three or four together, in early summer.

The Hedgehog.—This is the largest of the British insect-eating animals. It is about 10 in. long, with short limbs and a snout like a pig's. The back is covered

with an armour of spines. When alarmed, the hedgehog can roll itself into a ball with the head and limbs tucked in so that nothing but an array of sharp spines is presented to the enemy.

In the daytime the hedgehog sleeps in hedges and thickets, and comes out at night to feed. It lives chiefly on insects, snakes, worms, snails and birds' eggs, with fruit and roots, and occasional mice and birds. The young are born three or four together in summer and early autumn. Newly-born hedgehogs are blind, like kittens. They have soft, white prickles and no power to roll up.

The hedgehog hibernates all the winter, lying curled up under a heap of dead leaves without feeding or moving, till the warm weather returns.

A hedgehog is a useful friend in the garden and makes an interesting pet. He will make his own quarters in the garden or in an outhouse where a heap of hay or straw is left in the corner for him. He should be fed with a variety of fresh and wholesome food; morsels of raw meat, bones, freshly killed mice, and odd scraps of fresh vegetables are all acceptable to him. In addition, he will enjoy a little saucer of fresh bread and milk every morning. When the hedgehog prepares for his winter sleep he should be left severely alone till he comes out of his own accord in the spring.

The Rat.—There are two species of rat in Great Britain, the black rat and the brown rat. The larger brown rat is the more familiar and ferocious. The black rat has a shorter body, but a longer tail.

Rats are terribly destructive creatures as well as being germ carriers of disease. A distinguished biologist, who has studied the rat very carefully, says,

"The rat is the worst animal pest in the world. From its home among filth it visits dwellings and storerooms to pollute and destroy human food. It carries bubonic plague and many other diseases fatal to

man, and has been responsible for more untimely deaths among human beings than all the wars in history. On many a farm, if the grain eaten and wasted by rats and mice could be sold, the proceeds would more than pay all the farmer's taxes. The common brown rat has six to ten families a year, and each family averages ten in number.

"Rats feed upon all kinds of animal and vegetable matter. The brown rat makes its home in the open field, the hedgerow, and the river bank, as well as in stone walls, piers, and all kinds of buildings. It destroys grains when newly planted, while growing, and in every subsequent stage. It invades store and warehouse and destroys furs, laces, silks, carpets, leather goods, and groceries. It attacks fruits, vegetables and meats in the markets, and destroys by pollution ten times as much as it actually eats. It destroys eggs and young poultry and eats the eggs and young of song and game birds. It carries disease from house to house and bubonic plague from city to city. It causes disastrous fires, floods houses by gnawing lead water-pipes, and damages foundations, floors, doors, and furnishings of dwellings."

The Fox.—The fox is closely related to the dog, but differs in having elliptical pupils to the eyes, and in the shape of the skull. It has a sharp pointed nose, long upright ears and a bushy tail. The common British species is reddish-brown with white underneath.

The fox may burrow its own home, or occupy a hole already made by another animal, it may also choose to live in a hollow tree or a natural rocky cave.

By day the fox remains in its lair, and comes out at night to feed. It lives upon small animals and birds and is an arch enemy of the farmer. It eats also insects and fruit. Like the dog, it is a highly intelligent animal and very daring in pursuit of food. It is preserved in Britain for hunting.

The fur of the fox is extremely valuable, especially that of the American silver fox which is black with white tips (There is an illustration of the fox in *Volume I.*, page 149.)

A story for the English lesson.—An ass one day found a lion's skin. He wrapped himself in it and pretended to be the lion himself. He ran about the forest in his new coat, frightening the other animals. As soon as they saw him they fled in terror.

Presently the ass met a fox. Anxious to frighten him too, the ass rushed at him and tried to roar. But the fox stood still with a grin on his face.

"My friend," said the fox, "if you had only kept silent, I might have thought you were a lion. Directly you began to bray, I knew you for what you are—a donkey."

We must mind what we say, as well as what we do.

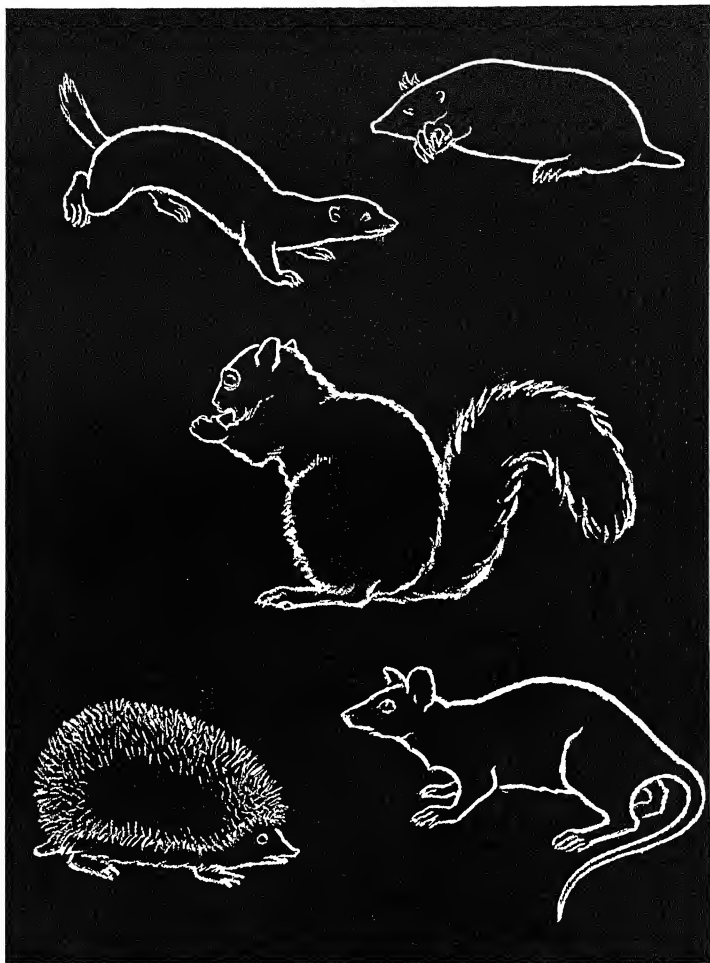
Tell me.—1. What does the beginning of the story tell you? 2. What is another name for an ass? 3. Whom did the ass pretend to be? 4. What did the other animals think of him? 5. What did the other animals do when they saw him? 6. Whom did the ass meet? 7. What did the ass do when he met the fox? 8. Why did the fox grin? 9. What does the end of the story tell you? 10. What do we learn from this story? 11. Retell the story.

Choose the right word.—

1. Donkeys (sing, bray, talk).
2. Lions (quack, cry, roar)
3. The ass (wrapped, kept, stood) himself in the lion's skin
4. The ass (danced, rushed, rose) at the fox.
5. "You are a donkey," (kept, thought, said) the fox

Write sentences.—

1. Tell how the ass frightened the other animals.
2. Tell what happened when the ass met the fox
3. Tell how the fox knew the ass for what he was.



FERRET

MOLE

LITTLE BEASTIES
SQUIRREL

HEDGEHOG

RAT

NATURE STORY

WHO KNEW BEST ?

(This is a story of four blackbirds For nature notes on the blackbird see
Volume II, page 519)



THE BIRDS' NEST

Drawing in Outline of Picture No 36 in the Portfolio

A VERY sensible old blackbird, having brought up her sons from their egg-shells in the way they should go, decided at length that it was time for them to go out into the world and seek their fortunes. They could now fly and feed themselves properly, and, though their voices were nothing much to boast of as yet, they gave promise of one day being able to sing as well as their father—a very notable songster in the wood in which they lived.

Besides these considerations, there was no longer any room for four big creatures in the nest, and nothing, Mrs. Blackbird felt sure, would cure them of the babyish habit of sleeping in it but separation from home and parents for a short time.

So she called them to her early one morning and bade them start on their expedition. But before they went she gave them a little advice, to which they listened respectfully.

"You had better not leave the wood," she said. "The outer world is dangerous, and there is plenty to enjoy and to explore here in safety. But, should you foolishly disregard this advice, here are three rules you must always keep in mind. Never go into or near a fruit garden, never go to sleep on the ground, and on no account go near boxes or barrels, or anything you do not understand. Now, don't let greed, laziness, or curiosity lead you to forget my warning, or you will certainly regret it."

Having explained to them what fruit-gardens were like, also how to recognise boxes and barrels, she looked affectionately at her four sons, gave them each a worm as a parting gift, and sent them away to see a little of the world they lived in.

"Take care of Joy," she called after them.

Now Jick, Jock, and Jerky were much further forward than Joy, as they had all left their egg-shells before him, and had both flown and talked at an earlier age. But he was his mother's darling.

They had none of them yet attained to their full beauty of plumage, but the rusty brown feathers were dear to the mother's heart, and already, in imagination, she saw them returning in full-dress black coats of the exquisite sheeny kind a well-bred blackbird always wears.

Jick, Jock, Jerky and Joy flew away in a great state of excitement, but with a firm determination to remember their mother's cautions, for they felt sure they must be very necessary when they recalled her tearful expression as she bade them "Good-bye."

And she stood at the top of a tree and watched until they were right out of sight. Then she returned to the lonely nest, and none of Mr. Blackbird's wittiest remarks or his sweetest songs could cheer his wife for many a day.

Meanwhile the brothers flew on to the very outskirts of the wood, and there they stayed for several days, awed by the great world beyond.

"We will just stay here and have a good look at it," they said at first, "and then we will go back."

This did well enough for a time, but presently they became quite used to the sight, and the three elder birds said:

"There can be no harm in going a tiny bit further so long as we remember our rules and keep the trees of the wood in sight."

Poor little Joy was terribly averse to going on, and begged to be left behind.

"Nonsense," said Jick very sharply. "Don't be a baby."

And they all flew on.

"Thus is far enough," said Jick at length.

To Joy's intense relief, the others nodded their heads in assent. He was quite exhausted by the pace at which they had come.

To pass the time, they began guessing what the different objects around them were.

"That," said Jerky, nodding towards a piece of ground walled in close by, "that must be a fruit garden. I really don't see

anything very dangerous about it, it seems quiet enough."

A few hours' sleep and a hearty meal did them all good.

"Suppose we go on a bit," proposed Jock. "It seems stupid to stop here now that we have got so far."

"But I thought we were going home," put in Joy timidly and with a sinking heart, for he was terribly home-sick.

"Going home," said Jerky scornfully—"Not I. I am going into the fruit garden for a while, it looks delightful. I have been watching it for a long time, and the birds are going in and out by the dozen, so there can be no harm in it. Besides I'd risk a good deal for those lovely red cherries over there on the wall."

His brothers declined to go with him.

"Call for me on your way back," he said as he disappeared.

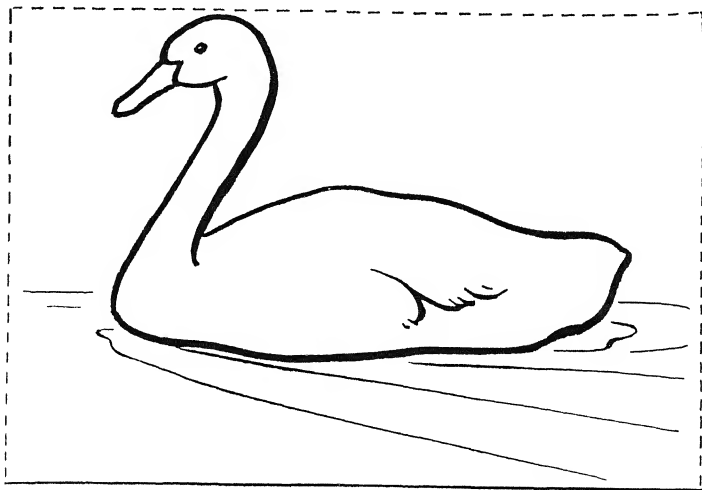
The three others had not gone far before they heard a tremendous noise like a clap of thunder. It startled them so much that they flew hastily into a neighbouring tree.

"Whatever is it thundering for when there is not a cloud in the sky?" whispered Jick.

It was well they did not hear the agonised cry of pain nor see their brother rise for one instant from the tempting cherry tree, flutter about in a desperate attempt at flight, and then fall heavily, a tumbled heap of feathers, at the feet of a man with a gun.

"So I've got another of you, you rascals, have I?" he said as he lifted the dead bird from the ground, and hung it up as a warning to others of its kind.

The three brothers, having recovered somewhat from their fright, started once more on their travels.



TRACE-OUT FOR FRIEZE—CYGNET

Place this Drawing for part of the Frieze, Picture No. 36



TRACE-OUT FOR FRIEZE—SWAN
Trace this Drawing for part of the Frieze, Picture No. 36

But while crossing a pleasant meadow, Jick exclaimed

"I think the thunder must have upset my nerves, I really can fly no longer. I will go down there and have a good sleep in the grass while you go on a little, as I am sure there can be no danger in such a sweet place as that, whatever mother might say to the contrary."

He reached the meadow in safety. Close to where he alighted stood a great cart-horse fast asleep, which Jick, never having seen such a thing before, took to be some kind of shed, and accordingly took shelter under him.

In the course of the afternoon the horse moved.

He felt something unusual under his hoof and lifted it.

There lay Jick crushed and dead.

"Dear, dear! I am exceedingly sorry," exclaimed the horse, for he was a good-natured beast. And he moved away to another part of the field.

Jock found travelling alone with Joy rather dull, besides which he began to feel a little nervous, for he suddenly realised that they had lost sight of the wood from which they had come.

Arriving at a ploughed field, he bade Joy stop, and they sat in the hedge for a while.

"We will go home now, Joy," he said with a grand air, "and tell mother the world is not such a bad place after all."

Joy gave a sigh of content. But just at that moment Jock espied something that interested him very much.

"That must be a box," he said excitedly. "Now, I do wonder what is inside it. I will just go down and take a peep."

Joy vainly implored him not to do anything so rash. He was already on the ground hopping round the box until he came to the front. There he discovered a most inviting-looking door standing wide open, while within wriggled a fine fat worm, evidently suspended from the roof.

This was too much for Jock's caution.

"It won't take a moment to fetch it," he thought, and hopped boldly in. A sudden

sharp sound behind him made him turn quickly to retrace his steps, but he only knocked his head against wooden bars. The door was shut, and all Jock's flutterings were in vain.

The next moment the trap was lifted by the boy who had been watching nearly all day for an unwary bird to be caught.

"Oh, such a beauty!" he cried. "Won't Sue be pleased!"

Then, heedless of the hoarse cries and agonised flutterings of the captive, he tucked the box under his arm and ran gleefully home.

Now, Sue was a little London girl who was going home that day after a fortnight's holiday in the country, so that the poor stunned bird was first moved into a tiny cage, and then followed a railway journey, at the end of which, though he did not know it, Jock was in the greatest city in the world, and in one of the very poorest parts of it.

There he spent the rest of his life cooped up in his miserable little cage, which hung by day on a wall in a stuffy overcrowded back street, and at night in a squalid, airless attic. When the sun shone he sang and implored the passers by to release him, but when the winter fogs came he could sing no more, and before another spring came round Jock was dead.

One day, some weeks after the four young blackbirds had flown away so gaily to see the world, there was a great commotion in the wood.

Mrs. Blackbird had long since given up all hope of ever seeing again any of the sons of whom she had been so justly proud, for she knew the fate of Jick and Jerky already from some neighbours who had been away for a visit into the outside world. As time went on and nothing could be heard of the other two, they also were given up and mourned by the bereaved mother. Imagine her joy and surprise at the arrival of a dusty, draggled, weary fellow upon the scene, her youngest chick and the pet of them all. Yes, it was Joy safe and

sound, but utterly worn out with his terrible experiences, all of which he had to relate some dozens of times to admiring friends and relations.

After the horrible and mysterious disappearance of Jock from his sight, he had flown in a panic towards the wood, pausing only at the meadow and again at the fruit garden, but as no one answered his cries at either spot he supposed his brothers had gone back without him. His flight was not rapid, for he so often was frightened by things he both saw and heard. Then he would hide in some bush or tree, and go on in an hour or so when he had recovered

his nerve. Indeed, he gave a very poor account of his courage, but none the less was his mother proud of him.

The story of this adventure was one of the favourite tales in all the nurseries of that wood for many a day, and it was seldom that the opportunity for drawing a moral from it was lost.

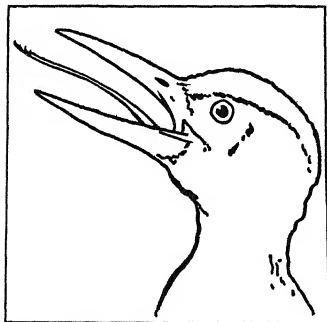
"Ah!" some elderly bird would say, "the young folks of the present day think themselves wonderfully clever, and that we old people know nothing, but remember Jick, Jock, and Jerky and ask yourself, who knew best?"

E. L. Haverfield.

STORIES TO READ OR TELL

THE STORY OF THE RED-HEADED WOODPECKER

Note.—In the *Class Picture* No 33 there is a woodpecker on the trunk of a tree, and the following story will interest the children. Woodpeckers are distinguished by feet adapted for climbing, and a barbed tongue which can be thrust into a crevice



to extract insects. In Great Britain there are three species of woodpeckers.

The green woodpecker shown in the *Class Picture* is common in southern and middle England. The plumage is olive green on the upper parts, crimson on the crown of the head, black on the face, yellow on the rump, and greenish grey below. It makes a hole in tree trunks as a resting place, usually selecting a rotten trunk. In the silence of a wood the woodpecker can often be heard tapping and boring with its beak. The greater spotted woodpecker is smaller and less common. The plumage is black on the upper parts, crimson on the back of the head and white and crimson below. The lesser spotted woodpecker is about five inches long. It has the plumage black on the back, wings and tail, with bars of white, and bright red on the crown.

Story.—Long, long ago, there lived an old woman in a little cottage by the forest. She was not a poor old woman. She had plenty of wood to burn in winter and plenty of meal to bake into bread all the year round. Her clothes were old-fashioned but warm. She always wore a grey dress and a little red cap.

Late one summer afternoon, the cottage door was open. The old woman stood by her fire, baking cakes for her evening meal. How good they smelled!

A tall old man who was passing by the cottage stopped a moment. Then he pushed open the garden gate and walked up the path to the door.

The old woman was bending low over the cakes, but she saw his shadow and looked up.

"Will you give me one of your cakes?" said the man.

The woman thought to herself, "Why did I leave the door open? The smell of these hot cakes will bring every beggar within miles to my house." Then she looked a second time at the man and saw that he was no beggar. He stood like a king in the doorway. His blue eyes were kind but very keen.

She looked at the six cakes that lay crisp and hot on the hearth. "Well, I will give him one," she thought, "but these are all too large."

She took a small handful of meal from the barrel and began to bake it into a cake. The man watched her from the door. As she turned the cake, it seemed to her too large to give away.

"I will bake a smaller one," she said to herself. She did not glance toward the stranger, but caught up a wee bit of meal and began to cook the second cake.

But that also looked too large to give away. She cooked a third cake that was no larger than a thumb. But when it was done, she shook her head, for it also was too large to give away. And still the old man waited patiently in the doorway, watching it all.

Then the old woman gathered up the cakes, large and small, and put them on a plate. The plate she set on the pantry shelf and then locked the door.

"I have no food for you," she said to the old man. "My cakes seem very small when I eat them, but they are far too large to give away. Ask bread at another door."

The old man's blue eyes flashed with fire as he drew himself up proudly.

"I have been round the world, but never have I met a soul so small. You have shelter, food and fire, but you will not share with another. This is your punishment. You shall seek your scanty food with pain. You shall bore, bore, bore in hard tree trunks for your food."

The old man struck his staff on the floor. A strong gust of wind carried the old woman up the chimney. The flames scorched her grey clothes black, but her red cap was unharmed.

A woodpecker flew out of the chimney and away to the wood. Rap! rap! rap! you can hear her tapping her beak on the tree-trunks as she hunts for food. But always and everywhere, she wears a black coat and a little red cap. Watch for the woodpecker and see if it is not so.

Fanny E. Coe.

Flash Cards—questions.—When the story has been read or told, and discussed, short questions can be written on *Flash Cards*.—

1. What sort of fireplace do you need so that you can bake cakes on the hearth?
2. Why does a cook turn her cakes?
3. What is a pantry used for?
4. What does the woodpecker live on?
5. How does it get its food?
6. Is a woodpecker larger than a sparrow?

Missing words.—Write these sentences on the blackboard, or preferably on cards, and let the children rewrite the sentences adding the missing words —

1. Late one summer afternoon, the cottage door was — (*open*).
2. She was not a — (*poor*) old woman.
3. His blue eyes were — (*kind*) but very keen.
4. As she turned the cake, it seemed to her too — (*large*) to give away.
5. A — (*strong*) gust of wind carried the old woman up the chimney.
6. The flames scorched her grey clothes black, but her red cap was — (*unharmed*).

Tell me.—Let the children answer the following questions based on the story—

1. How did the old woman dress?
2. What made the old man come to the cottage door?
3. How did the old woman know that a man was near before she saw him?
4. Was the woman pleased to see the old man?
5. Why did she bake three more cakes?
6. How many cakes did she bake altogether?
7. What reason did the old woman give for not giving the old man a cake?
8. Why did the old woman deserve to be punished?
9. What was her punishment?

A STORE OF NUTS FOR THE WINTER

NEVER before had Mr and Mrs. Magpie had such a quarrel. It was all about a lost button. They pecked, they fought, feathers flew, they were both angry and cross, and in the end it didn't do any good, they didn't find the button and only made themselves tired and miserable and sorry.

"If only we had a better storehouse," said Mr. Mag, "it wouldn't have happened."

"Then I will find a better storehouse," said his wife—and she did.

It was a hole in a tree, a deep hole in a big tree, precisely the place to store buttons and bits of glass and other precious treasures. Mr. Mag tidied it up, and turned out the bits of fern and odd nuts that were lying at the bottom of it, and Mr. Mag was so pleased that he flew away at once to find a treasure to keep in it.

Mrs. Mag decided that she had better mount guard and take a rest at the same time.

It was a beautiful afternoon, and the wood was very quiet and peaceful, the cock-pheasant's harsh cry was the only disturbing sound.

"I hate that cock-pheasant," said Mrs. Mag, "he's so stuck-up, and makes such a noise—I wish I could pull a feather out of his tail. Hullo!"

And then Mrs. Mag forgot all about the cock-pheasant. A squirrel was busy at the new storehouse, carefully collecting the fern and rubbish and nuts that she had tidied away, and packing them in the hole again.

Mrs. Mag watched him for several minutes, then she flew over his head backwards and forwards hoping to disturb him in his work. But the squirrel took not the slightest notice of her, or of anything, until every nut was back in the storehouse, then he hopped away contentedly.

"It'll be easy enough to clear them out again," she said, "when Mr. Mag comes back we'll set to work."

But before Mr. Mag came back the squirrel had paid three more visits to the storehouse, carrying nuts and packing them away with the greatest care.

Mrs. Mag was feeling quite angry with him by the time Mr. Mag arrived.

"He evidently thinks that it is his storehouse," she said, when she had told the whole story to her husband.

"Well, it isn't," said Mr. Mag. "What are we to do? Next time he comes I'll fight him."

"That's no good," said Mrs. Mag.

"Well, let's clear all his things out again," said Mr. Mag, "it won't take long."

"And he won't take long to put them back again," said Mrs. Mag. "No, we'll go and talk to him. You let me do all the talking, and don't mention the hole."

"All right—manage it your own way," said Mr. Mag; "only that storehouse we must have. Look at this lovely piece of glass. I found it up at the big house on the edge of the wood," and he held up with the greatest pride a glass stopper, which someone no doubt was wanting very badly.

"There he is," said Mrs. Mag, "now, not a word about the hole," and she flew down to meet Mr. Squirrel, followed by her husband.

"Good afternoon," said Mrs. Mag, very politely.

"Good afternoon," said Mr. Mag, imitating his wife.

The squirrel did not answer. He began to wonder and think. Mrs. Mag was not usually so polite.

"A good year for nuts?" asked Mrs. Mag.

The squirrel did not answer.

"How about——" began Mr. Mag.

Mrs. Mag pulled his tail.

"You'll have to work hard before the winter," said Mrs. Mag; "of course you want to get a good store of nuts for the winter."

"But I've found a grand storehouse," said the squirrel. "Come along, and I'll show it to you."

"I don't think we care to see it, thank you," said Mrs. Mag.

Just then the cock-pheasant's cry was heard through the wood.

"We came to see you because I wanted to tell you something," said Mrs. Mag. "You know the cock-pheasant?"

"Indeed I do," said the squirrel. "The noisy bird, makes such a noise. Nearly as bad as the cuckoo! Why can't he be quiet? I can see no good in noises of any kind."

"I don't like him," said Mrs. Mag; "but have you ever touched the tip of his tail?"

"I never go near him," said the squirrel.

"Then you make a mistake," said Mrs. Mag, "if you can once touch the tip of his tail, you can wish for anything you like."

Mr. Mag flew away: he thought his wife was talking nonsense, but the squirrel sat up on his hind legs and began to think. Mrs. Mag waited a few minutes, then she said very slowly

"If you can touch the tip of the cock-pheasant's tail, you may wish for anything you like." Then she flew after her husband.

She found him clearing the nuts out of the hole.

"You'll have plenty of time to do that to-morrow," she said. "I shouldn't do any more work to-day."

"The squirrel will be back again to-morrow," said Mr. Mag.

"Not he," said Mrs. Mag, "I've given him

something to think about. Come up to the big house and look for more treasures."

Mr. Mag was glad of any excuse to stop work, and he flew away.

Next morning he found the squirrel's hoard was just as he had left it, and he and Mrs. Mag soon turned out all the nuts and put their own treasures down the hole.

The squirrel spent the day in jumping from branch to branch, wondering, wondering, wondering. He was thinking about the cock-pheasant's tail. He couldn't quite make up his mind whether the magpie's story was a true one. If it were true, he need not work any more. He could touch the tail and wish for a store of nuts for the winter. He spent the whole of that day idly wondering. The next morning he decided to ask the dormouse if she knew anything about the cock-pheasant's tail. But the dormouse did not help him much. She said she thought the cock-pheasant had a very fine tail, and of course a fine tail was a fine thing to have, but she didn't know anything about the tip of the fine tail. She advised the squirrel to touch it and see what happened.

The squirrel spent another day wondering as he jumped from bough to bough, but on the next he determined to take the dormouse's advice and see what happened.

But as he was jumping to the ground, he jumped on to a mole and woke him up. He at once seized the chance to ask the mole's opinion.

The mole didn't much enjoy being jumped upon and was rather cross. He said the cock-pheasant had too much tail, so had the squirrel himself, after all, long tails were of very little use to anybody, but it couldn't hurt anyone to touch a tip of a tail and see what happened, only he should advise the squirrel to touch it gently, not to jump on it.

So the squirrel set out to find the cock-pheasant without wondering any more.

He heard him calling in the wood, he saw him flying through the trees. Several times he saw him strutting on the ground,

but he found it difficult to get near him, he could not travel as quickly as the cock-pheasant. Each time the squirrel was near enough to touch his tail, away flew the bird.

The squirrel spent many days in following the cock-pheasant and indeed the cock-pheasant began to be quite annoyed at being followed.

At last one day as the cock-pheasant was strutting proudly through the wood, the squirrel managed to get behind him and close to him. He touched the tip of the long tail. There was a whirring sound as the bird flew away, startled and angry.

The squirrel stood still, shut his eyes tightly, and wished not once but three times "A store of nuts for the winter, a store of nuts for the winter, a store of nuts for the winter!"

Then he waited, but nothing happened. Once more he wished and this time something terrible happened. He found himself

covered with something; he felt as if he were choking, he could not get away.

"Caught! Quick! Put him in the basket! shut down the lid! Won't she be pleased?"

He was a prisoner, caught by a small boy. He was so frightened and so terrified that he scarcely knew what happened to him, what he was doing or what was being done to him, until he found himself in a cage.

There were nuts in plenty, he had a store for the winter indeed, but he had lost his liberty. How he wished himself back in the wood hunting for his own nuts, how he hated the magpie who had brought all this trouble upon him! He never guessed that when Mrs. Mag told him he could *wish* for anything, she didn't mean that he would get it, indeed, she never expected him to get it, she only wanted to annoy the cock-pheasant and get a storehouse for herself for the winter.

Maggie Browne.

STORY AND PLAY

STORY—THE RABBITS' CHRISTMAS PARTY

Introduction.—This original story is easily dramatised. Read the story straight through to the children once or twice, then discuss with them how to act it in one scene. Consider the setting, write the names of the characters on the board and allot the parts. Read the story once more so that the chosen children can pay attention to their particular parts, then let them act it. Re-read parts of the story if the children are at a loss to proceed. A dramatised version, which may be used at a school concert, is given at the end of the story.

Story.—There was great excitement in the rabbit burrow in Mr. Brown's field on Christmas Day. Mr. and Mrs. Rabbit were

giving a party for their children, Flippy and Floppy. The night before, when Flippy and Floppy were in bed, Mr. and Mrs. Rabbit had set up a Christmas tree in the parlour. It was a real Christmas tree, only a very small one, which Mr. Rabbit had nibbled off and dragged to their burrow before the snow came. Mrs. Rabbit had made a parcel for each guest, so that everyone should have a present of the thing he or she liked best. Mrs. Rabbit tied the parcels on the tree, and hung it with tinsel and other pretty things, and when the children saw it next morning they were delighted, and longed for the party to begin.

It seemed a very long morning to Flippy and Floppy, but at last it was nearly three o'clock, and they were sent to wash their paws and brush their whiskers ready to

receive the guests Just as the village clock struck three there was a tap on the door. It was Twirlytail Rat, with his fur brushed smooth and sleek and his round eyes sparkling with excitement

"Hullo, Floppy," said Twirlytail. "Happy Christmas!"

Mrs Rabbit held out her paw to him "We are so glad you could come, Twirlytail," she said "I heard you were going to move"

"We shall be leaving next week," said Twirlytail

"Why is that?" asked Mr Rabbit

"Mr Smith has just bought two new dustbins with lids, so there is very little to eat at home now," replied Twirlytail And, indeed he looked quite thin.

"Dear! dear! What a pity!" said Mrs Rabbit, making up her mind to see that Twirlytail had a good tea and something to take home

Then there was another knock at the door, and it was Mildred and Monty Mouse.

"How are you, my dears?" said Mrs. Rabbit, patting their heads.

"Very well, thank you, Mrs Rabbit," replied the little mice

There was another knock, and Floppy cried, "That must be Dr. Mole"

And so it was He was quite old and rather blind, but he had much spirit and was a great friend of the children's

"Merry Christmas to you all!" he cried, as he came in.

"Now we are all here," said Mrs. Rabbit

And Mr Rabbit said, "And now for the Christmas Tree!"

Everyone shouted "Hooray!" and they crowded round the tree while Mr Rabbit nibbled off the string from the parcels

The presents could not have been better chosen Twirlytail Rat had two thick bacon rinds, Mildred Mouse had a piece of cheese and Monty a lump of beef dripping. Dr Mole, who did not expect a present and was quite taken by surprise, had a caterpillar, which he thought was a great treat, though it made the others shudder

Flippy and Floppy had lettuce leaves, which I am sorry to say, came from Mr Brown's greenhouse. But rabbits do not understand that they must not take other people's greenstuffs

Just as the fun was at its highest and jolliest, there came a terrible BANG at the door Everyone cried, "Oh!" and stood still, for no one else was expected to the party And then came a sound very terrible to Rabbits and Rats and Mice,—a long drawn out, "Mi-a-ow!"

"The Cat!" shrieked the Rabbits and Twirlytail.

"Oh! Oh!" cried Mildred and Monty, clasping one another.

Then there came another fearful BANG

"He will knock down the door in a minute," cried Mr. Rabbit.

"What shall we do?" wailed Mrs Rabbit, wringing her paws, while the children sobbed with fright.

Dr Mole, who had said nothing, now came forward. "I think I can help you," he said. "Cat doesn't like moles Take the others into the next burrow, and I will send her away"

This was really very brave of Dr Mole, for there was no knowing that Cat would not pounce on him if she were really hungry. But Dr Mole trusted that he was too old and tough for her, and he was determined to do his best to save the children from her claws. Also, he had an idea.

So when Mr and Mrs. Rabbit had got the children and themselves safely out of the way, Dr. Mole opened the door Cat pounced in at once and was surprised to see only Dr Mole She went round the walls of the parlour, sniffing and sniffing for the others

"Where are they? Where are they?" she muttered.

"Now, listen to me," said Dr Mole, severely "You mustn't come and upset the children on Christmas Day"

"Well, I am hungry," said Cat "The family I live with has gone away and left me nothing to eat,—no Christmas turkey, no pudding, no anything."

"That is hard on you," said Dr. Mole. "But I know where you can find a fine Christmas dinner."

"Where?" asked Cat.

"By Mr Brown's dustbin there is a kipper that has hardly been touched," replied Dr Mole

"A kipper," said Cat, licking her lips. "Ah!"

"Now you be a kind Cat," said Dr Mole, in his fatherly way, "because it is Christmas Day. Leave these children to have their party and go and eat that kipper instead"

"All right, Doctor," said Cat, who was not really ill-natured "I will"

"Good creature!" cried Dr. Mole "Now promise me you will not come back here"

"I promise," replied Cat, "if that kipper is there"

"I saw and smelt it myself not half an hour ago," said Dr Mole

"Very well," said Cat. "Good-bye, Doctor Merry Christmas!" And she went out

Dr. Mole waited till Cat had gone right away, then he shut the door and called the others.

They came in on tiptoe, still anxious and trembling

"Has Cat gone?" whispered Mrs Rabbit.

"Yes, she has gone. She is not such a bad creature, only she has had nothing to eat to-day," replied Dr. Mole.

"There now!" exclaimed Mrs. Rabbit. "Flippy brought this chicken leg for the Christmas tree, but I could not think of anyone who would like it. Perhaps Cat would."

"I will run up with it to the top of the burrow," said Mr Rabbit, anxious not to be unkind on Christmas Day.

"No, I will go," said Mole, "or Cat might see you, and be tempted to change her mind. She is *very* hungry, you know"

So Dr. Mole went after Cat. He managed to call her back and gave her the bone, as a Christmas present from Mrs Rabbit. Cat was deeply touched by such kindness

after the way she had behaved. She took the bone to Mr Brown's dustbin, where she found the kipper as Dr Mole had said. And as she ate them there she made up her mind only to catch house mice, as her duty was, and to leave the field creatures alone

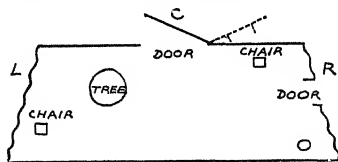
The Rabbits finished their party quite happily, and all said it was a great success, in spite of the unwelcome visitor

PLAY—THE RABBITS' CHRISTMAS PARTY

This is a play, based on the preceding story, for boys and girls of varying ages. The parts of *Mr and Mrs Rabbit* and *Dr Mole* are best suited to children of seven. The parts of *Flippy and Floppy Rabbit*, *Twirlytail Rat* and *Cat* may be taken by six-year-olds, while the parts of *Mildred and Monty Mouse* are within the capacity of children of five

People in the play MR RABBIT MRS RABBIT FLIPPY RABBIT FLOPPY RABBIT. TWIRLYTAIL RAT DOCTOR MOLE MILDRED MOUSE MONTY MOUSE CAT

Scene The Rabbits' Parlour. The room is prepared for a party, with coloured streamers and balloons. A decorated Christmas tree stands to the left of the room, bearing six little parcels addressed as follows "Flippy Rabbit" (lettuce leaves), "Floppy Rabbit" (lettuce leaves), "Twirlytail Rat" (2 bacon rinds), "Dr Mole" (a caterpillar), "Mildred Mouse" (a piece of cheese), "Monty Mouse" (a lump of dripping). There are two doors one at the back (C) and one on the right (R)



ARRANGEMENT OF STAGE

[*Flippy and Floppy Rabbit are playing*
Mr and Mrs Rabbit come in, R]

Mrs. Rabbit Now, my dears, it is nearly three o'clock. Go and wash your paws and brush your whiskers.

Floppy and Floppy. Yes, Mummy (Run out, R.)

Mrs. Rabbit How good they are on Christmas Day!

Mr. Rabbit Who is coming to the Party?

Mrs. Rabbit Twirlytail Rat and the two Mice, Mildred and Monty. I asked Philip Dormouse, but he was too sleepy. Doctor Mole will be here as well.

[*Floppy and Floppy Rabbit run in*]

Floppy. Do we look clean?

Floppy Are we tidy?

Mrs. Rabbit You both look very nice little Rabbits

[*There is a tap at the door, C*]

Mr. Rabbit. Open the door, Floppy

Floppy (opening the door). It is Twirlytail Rat! Hallo, Twirlytail.

Twirlytail Rat Hallo, Floppy Happy Christmas!

Mrs. Rabbit. We are so glad you could come, Twirlytail. I heard you were going to move.

Twirlytail Rat. We shall be leaving next week

Mr. Rabbit Why is that?

Twirlytail Rat Mr Smith has just bought two new dustbins with lids, so there is very little to eat at home now.

Mrs. Rabbit Dear! dear! What a pity!

[*There is a tap at the door, C*]

Floppy (opening the door) Here are Mildred and Monty Mouse. Come in, Mildred and Monty

Mrs. Rabbit How are you, my dears?

Monty Very well, thank you, Mrs Rabbit

[*There is a tap at the door, C*]

Floppy. That must be Dr. Mole. (Opens door) Merry Christmas, Doctor.

Dr. Mole Merry Christmas to you all!

Mrs. Rabbit Now we are all here

Mr. Rabbit And now for the Christmas Tree!

Everyone Hooray! (They gather round the tree while Mr. Rabbit takes off the presents)

Mr. Rabbit Master Twirlytail Rat!

Twirlytail Rat (taking his parcel). Thank you, sir

Floppy, Floppy, Mildred and Monty (together) What is it?

Twirlytail Rat (unpacking parcel). Why, it is two lovely bacon rinds!

Mr. Rabbit. Miss Mildred Mouse!

Mildred Mouse (taking parcel) Thank you, Mr Rabbit (Unpacks it.) What a fine piece of cheese!

Mr. Rabbit. Master Monty Mouse!

Monty Mouse (taking parcel). Thank you very much

Mildred Mouse. What is in your parcel, Monty?

Monty Mouse (unpacking parcel) Oh! It is a beautiful lump of dripping!

Mr. Rabbit Doctor Mole!

Dr. Mole (taking parcel). Dear me! Dear me! I did not think I should have a present

Thank you, Rabbit

Mildred Mouse What is it, Doctor?

Dr. Mole (unpacking parcel). My eyes are so bad I cannot see what it is, but it smells good

Twirlytail Rat It is a caterpillar. Ugh!

Dr. Mole A caterpillar! Now what a grand present!

Mr. Rabbit. Miss and Master Rabbit!

Floppy Rabbit (taking parcel) I know what ours will be. Lettuce leaves! Thank you, Daddy

Floppy Rabbit (unpacking parcel). Yes, it is How lovely!

[*There is a sudden great bang on the door, C*]

Everyone. Oh!

Cat (outside the door) Mi-a-ow!

Mr and Mrs. Rabbit, Floppy and Floppy. It's Cat!

Twirlytail, Mildred and Monty (shrieking). Oh! Oh!

[*There is another terrible bang at the door The Children shriek and cling to one another*]

Mr. Rabbit He will knock the door down in a minute.

Mrs. Rabbit (wringing her paws) What shall we do?

[*Children begin to cry*]

Dr Mole I think I can help you, Rabbit.

Mr Rabbit What can you do, Doctor?

Dr. Mole. Cat doesn't like moles You take the others into the next burrow and shut the door and I will send him away

Mr. Rabbit Very well, Doctor See what you can do

Mrs Rabbit. Come along, children. There! there! don't cry!

[*They go out, R crying and shaking, except Dr Mole*]

Dr. Mole (opening the door). Now, Cat, what do you want?

[*Cat comes in, C and sniffs about*]

Cat Where are they? Where are they?

Dr Mole. Listen to me, Cat. You mustn't come and upset the children on Christmas Day

Cat Well, I am hungry. The family I live with has gone away and left me nothing to eat,—no Christmas dinner, no pudding, no anything

Dr. Mole. That is hard on you But I know where you can find a fine Christmas dinner

Cat. Where?

Dr. Mole By Mr Brown's dustbin there is a kipper which has hardly been touched

Cat (licking her lips). A kipper! Ah!

Dr. Mole Now you be a kind Cat, because it is Christmas Day. Leave these children to have their party and go to eat that kipper instead

Cat All right, Doctor, I will.

Dr. Mole. Good fellow! Now promise me you will not come back here

Cat I promise,—if that kipper is there.

Dr. Mole. I saw and smelt it myself not half an hour ago.

Cat. Very well. Good-bye, Doctor Merry Christmas. (*Goes out, C.*)

Dr. Mole. Good-bye. (*Shuts the door*) Rabbit! come out! It is quite safe!

[*The others come in, R cautiously*]

Mrs Rabbit. Has Cat gone?

Dr Mole. Yes, he has gone He is not such a bad fellow, only he has had nothing to eat to-day.

Mrs. Rabbit. There now! Flippy brought this chicken leg down here for the Christmas tree, but I could not think of anyone who would like it. Perhaps Cat would.

Dr. Mole. Yes, I think he would

Mr. Rabbit. I will run up with it to the top of the burrow

Mr. Mole. No, I will go, or Cat might see you He is very hungry, you know, and might be tempted to change his mind Perhaps I shall just catch him.

[*Dr Mole goes out with bone, C*]

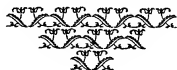
Mrs Rabbit. Now we will go on with the party!

Song "Old Christmas Carol," page 1104

Children join hands round Mr and Mrs. Rabbit and sing.

God bless the master of this house,
Likewise the mistress, too,
And all the little children
That round the table go,
And all your kin and kinsmen
That live both far and near
We wish you a merry Christmas
And a happy New Year.

Kate Lay



RHYMES AND POEMS

THE RABBIT

Brown bunny sits inside his burrow
Till everything is still,
Then out he slips along the furrow,
Or up the grassy hill.

He nibbles all about the bushes
Or sits to wash his face,
But at a sound he stamps, and rushes
At a surprising pace

You see some little streaks and flashes,
A last sharp twink of white,
As down his hidy-hole he dashes
And disappears from sight

Edith King.

Do you know?—This poem tells many things about the ways of wild rabbits. Ask such questions as the following to ensure that the children know certain facts about wild rabbits—1. What is a rabbit sometimes called? 2. What is the name of a rabbit's hole? 3. Why does a rabbit stay in its burrow "till everything is still"? 4. What word in the poem rhymes with *burrow*? 5. What is a *furrow*? 6. Show how a rabbit nibbles. 7. Show how a rabbit washes its face. 8. Show how a rabbit stamps. 9. What part of a wild rabbit is white. 10. When does a rabbit dash down his hidy-hole? 11. Show how to "disappear from sight."

THE HEDGEHOG

The hedgehog is a little beast
Who likes a quiet wood,
Where he can feed his family
On proper hedgehog food.

He has a funny little snout
That's rather like a pig's,
With which he smells, like us, of course,
But also runs and digs

He wears the queerest prickly coat,
Instead of hair or fur,
And only has to curl himself
To bristle like a burr.

He does not need to battle with
Or run away from foes,
His coat does all the work for him,
It pricks them on the nose

Edith King

Do you know?—Ask such questions as the following to ensure that the children know certain facts about hedgehogs. (There is a blackboard drawing of a hedgehog on page 1079) 1. What is the hedgehog called in the poem? 2. Where does a hedgehog live? 3. What do hedgehogs eat? (Worms, slugs, beetles) 4. What is a hedgehog's snout? 5. What other animal has a snout like the hedgehog's? 6. What does a hedgehog do with his snout? 7. What kind of a coat has the hedgehog? 8. What does the hedgehog do if a dog goes near it? 9. Why doesn't a hedgehog need to fight? 10. What would happen to a dog if it tried to bite a hedgehog?

THE CUCKOO

(This poem is set to music on page 1102)

The Cuckoo is a tell-tale,
A mischief-making bird;
He flies to East, he flies to West
And whispers into every nest
The wicked things he's heard;
He loves to spread his naughty lies,

He laughs about it as he flies
*"Cuckoo," he cries, "cuckoo, cuckoo,
 It's true, it's true"*

And when the fairies catch him
 His busy wings they dock,
 They shut him up for evermore
 (He may not go beyond the door)
 Inside a wooden clock,
 Inside a wooden clock he cowers,
 And has to tell the proper hours—
*"Cuckoo," he cries, "cuckoo, cuckoo,
 It's true, it's true."*

Rose Fyleman.

Note.—Tell the children how the cuckoo carries her eggs to the nest of another bird, and never takes the trouble to look after her own eggs or her babies. The poet tells us that the cuckoo is a naughty, mischief-making bird. Explain the meanings of the words *dock* and *cowers*. Draw a sketch of a cuckoo clock

PICNICS

If you go a-picnicking and throw your scraps about
 You'll never see the little folk go running in and out,
 And if you leave your orange-peel all littered on the grass
 You'll never go to Fairy Land or see the fairies pass.
 For empty tins and tangled strings
 And paper bags are not the things
 To scatter where a lunnet sings

So if you go a-picnicking remember you're a guest
 Of all the tiny people, and you'll really find it best
 To leave their ball-room tidy and to clear away the mess,
 And *perhaps* you'll see a fairy in her newest dancing dress
 But paper bags and broken combs
 Will really wreck the pixie homes
 And frighten all the tiny gnomes

But if you go a-picnicking and you are elfin-wise
 You'll maybe hear with fairy ears and see with goblin eyes,
 The little folk will welcome you and they will open wide
 The hidden doors of Fairy Land, and you will pass inside,
 And maybe see a baby fay
 White cradled in a cherry spray
 Although it is Bank Holiday.

B E Todd.

Note.—We can all learn lessons from the fairy people—to be kind and cheerful, and quick to help others. Thus fairy song tells us that fairies will never show themselves to those untidy, selfish children who leave—

"Orange-peel all littered on the grass
 Empty tins and tangled strings
 And paper bags——"

wherever they have been "a-picnicking"
 Parties enjoying their food on the grass under the blue sky ought to remember that they are guests of the fairies, who keep their ball-rooms tidy and beautiful, and are frightened away by the sight of ugly litter. A child who is, however, "elfin-wise" wise about the habits and ways of fairies—will be loved by the fairies, and probably, even on a Bank Holiday, invited into Fairy Land, to see—

"A baby fay
 White cradled in a cherry spray"

The music of the poem is light and dancing. The three short lines all rhyming together at the ends of the stanzas are emphatic. The poem appeals to children, and makes a very good recitation, with scope for expression and individuality. It requires speaking not too quickly but clearly and fluently, so that the rhythm is not broken up. The poet has found many names for the fairies. He calls them the "tiny people, pixies, gnomes, elves, little folks, and baby fay"

A linnet is a little brown English songbird with a crimson chest and forehead

- 1 Where is the baby fay's cradle hung?
- 2 How small do you think fairies are?
- 3 Where are their ball-rooms found?
- 4 Why should you never leave litter about?
- 5 Write down the different names given to fairies in the poem.
- 6 What children are loved by the fairies?
- 7 Tell all you know about a linnet.
- 8 What does the poet say of a linnet's song?
- 9 Write out some lines that you would like to remember

THE CURLIEST THING

The squirrel is the curliest thing
 I think I ever saw,
 He curls his back, he curls his tail,
 He curls each little paw.
 He curls his little vest so white,
 His little coat so grey—
 He is the most curled-up wee soul
 Out in the woods at play!

Old Rhyme.

Note—This is a capital rhyme for the children to learn after their talks about the squirrel. During the talks the teacher can prepare the way by frequent reference to the squirrel's *curly* tail; the way in which it *curls* its body, how it *curls* its paws when holding a nut, the *curly* nature of its soft fur. Note that the rhyme refers to the *grey* squirrel, the one in the class picture is *red*.

FAIRIES IN WINTER-TIME

Deep down near the hidden roots
 Of the oldest trees
 There the squirrels hoard their nuts,
 And the kindest bees
 Sometimes leave a honey-comb . . .
 What d'you think that's for?
 Why . . . of course it's meant to be
 Just a Fairies' Store!

For the Fairies feast and dance
 And they hold their Court
 Just the same when nights are long
 As when nights are short,
 Just the same through frosty cold
 As in summer weather
 They've a winter hidey home
 Where they live together.

All the squirrels know the spot
 All kind bees as well
 But they will not breathe a word
 None of them will tell
 Still . . . I've got a secret plan
 When it starts to snow
 I shall track the Fairies' feet
 And then I shall know!

Ethel Talbot

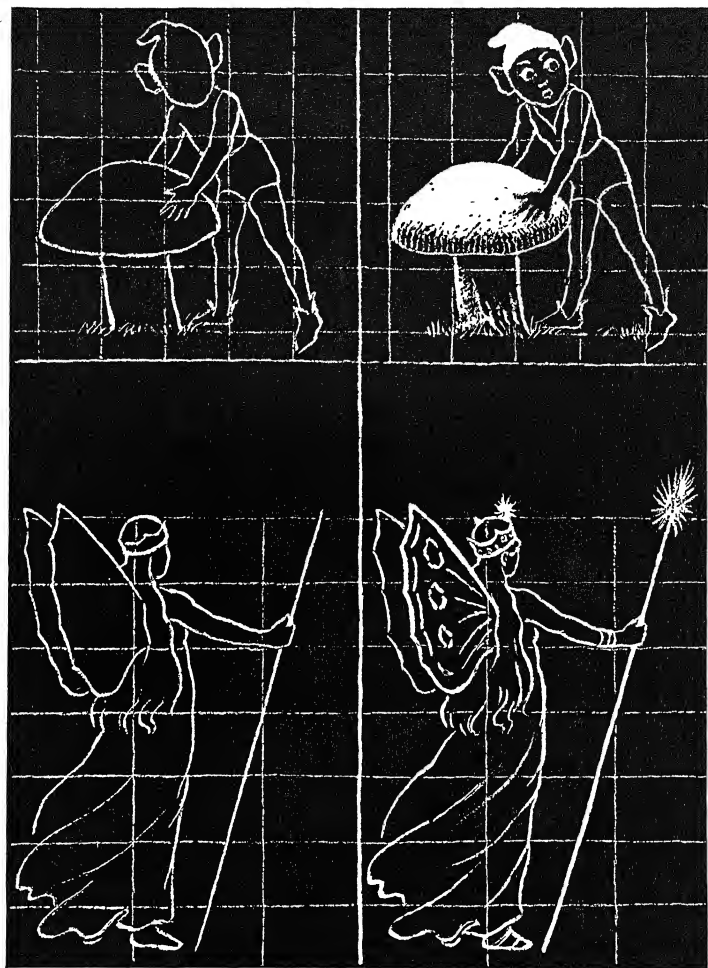
Note—In this poem the writer tells us how the fairies find food in winter. They are supplied by the squirrels and bees with nuts and honey-comb, and they keep a little store—

“Deep down near the hidden roots
 Of the oldest trees”

In winter fairies live all together in a “hidey home” and hold their dances as in summer, but only the squirrels and the kindest bees know where to find them. The poet, however, has a “secret plan” for finding out the fairies' winter quarters. This she divulges at the end of the poem.

The children should recite the poem in a natural, conversational tone, bringing out the meaning of such words as—“deep down,” “frosty cold,” “breathe a word,” “secret plan,” “winter hidey home.”

1. Who are the fairies' friends?
2. How do they help the fairies in winter?
3. What do the fairies call their winter house?
4. What food do they eat?
5. How do they spend the long winter nights?
6. Which words describe wintry weather?
7. What is the poet's “secret plan”?



ELVES AND FAIRIES
1097



FIR



OAK



ASH

TREES



POPLAR

The Fir tree is a soldier bold,
So straight and tall he stands,
The Oak a mighty sage of old
With gnarl'd and crooked hands

The Ash tree weaves a net of lace
With leaves against the sky,
The Poplars seem to run a race
To reach the clouds on high



PLANE

The Plane tree gives us playthings,
And shades the town's hot way,
The Aspen seems to say things
In whispers all the day



ASPEN

The Hawthorn in the winter drear
Gives hungry birds their food,
The Holly comes with Christmas cheer
And all things glad and good



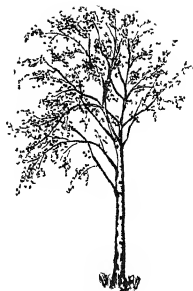
HAWTHORN



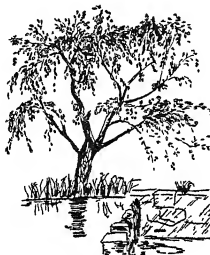
HOLLY

The Willow has a graceful air
Above the waterfall;
But the Birch tree is a lady fair,
And lovehest of all

Lonsdale Ragg.



BIRCH



WILLOW

MAY DAY

Good morning, lords and ladies, it is the
first of May,
We hope you'll view our garland, it is so
sweet and gay

The cuckoo sings in April, the cuckoo sings
in May,
The cuckoo sings in June, in July she flies
away

The cuckoo drinks cold water to make her
sing so clear.
And then she sings Cuckoo! Cuckoo! for
three months in the year.

I love my little brother and sister every
day,

But I seem to love them better in the merry
month of May.

Country Rhyme.

WHEN YOU WALK

When you walk in a field,
Look down
Lest you tramp
On a daisy's crown!

But in a city
Look always high,
And watch
The beautiful clouds go by!
James Stephens.

SONGS

ACTION SONG—SQUIRRELS.

This song gives opportunity for free interpretation of the words and music. The children hold their arms bent up with the hands closed, in the position of a squirrel's forelegs, and jump about as they please, keeping the feet together.

1. Children jump about singing.

We are squirrels,
Living free,
In the branches
Of a tree

2. Children pretend to hunt for food:

Hopping gaily
Through the wood,
Looking for our
Daily food

3. Children pretend to eat nuts

Nuts and berries
See us eat,
Standing upright
On our feet

4. Children pretend to scrape holes:

Sometimes making
In the ground,
Little holes for
Nuts we've found.

5. Children pretend to bury nuts.

Scrape a wee hole,
Not too wide,
Then an acorn
Lay inside.

6. Children pretend to find nuts.

Winter's coming
On apace,
Goes each squirrel
To his place.

7. Children pretend to squat down in nests

Buries himself
In his nest
With big nuts
He likes best

8. Children pretend to sleep.

When the winter's
Snow is deep,
Each small squirrel
Lies asleep



SQUIRRELS

ACTION SONG

KATE LAY

PERCY G. SAUNDERS

Dohz D || m , r . m , f : s . m | f , s . l : s }

1. We are squirrels Liv - ing free,
2. Hop - ping gai - ly Through the wood,

|| f , s . l , t : d' m | s . , r : d ||

In the branch - es Of a tree.
Look - ing for our Dai - ly food.

3. Nuts and berries
See us eat,
Standing upright
On our feet.

5. Scrape a wee hole,
Not too wide,
Then an acorn
Lay inside.

7. Buries himself
In his nest
With the big nuts
He likes best.

4. Sometimes making
In the ground,
Little holes for
Nuts we've found.

6. Winter's coming
On apace,
Goes each squirrel
To his place.

8. When the winter's
Snow is deep,
Each small squirrel
Lies asleep.

THE CUCKOO

ROSE FYLEMAN

PERCY G. SAUNDERS

In a chattering manner

Doh = A { . : : : : .s₁ }

1. The
2. And

Cuck-oo is a tell-tale, A mis-chief-mak-ing bird; He
when the fair-ies catch him, His bu-sy wings they dock; They

flies to East, he flies to West And whis-pers in-to ev-'ry nest, The
shut him up for ev-er more (He may not go be-yond the door) In -

|| 1, .d :t, .r | d :- . | : | : | }

wick - ed things he's heard;
-side a wood - en clock;

: | : .m, | 1, .1, :se, .se, | 1, .1, :t, .t, | }

He loves to spread his naugh - ty lies, He
In - side a wood - en clock he cow'rs, And

|| d .d :t, .t, | d .d :r .m | d :- .s, | s, :- .m | }

laughs a - bout it as he flies. "Cuck - oo," he cries, "Cuck -
has to tell the pro - per hours-"Cuck - oo," he cries, Cuck -

|| d :- m | d :- .m | d :- .m | d :- . | : | : | ||

-oo, Cuck - oo, It's true, it's true."
-oo, Cuck - oo, It's true, it's true."

OLD CHRISTMAS CAROL

PERCY G. SAUNDERS

Brightly

Doh = D

God bless the mas - ter_

of this house, Like - wise the mis - tress, too, And

all the lit - tle_ chil - dren, That_

$\{d' :l | t :so | l :- | - :t | d' :- .s | m :f \}$
 round the ta - ble go, And all your kin and

$\{s :l | s :s | t :s | l :s :fo | s :- | - :l .t \}$
 kins - men That dwell both far_ and near; I_

$\{d' :t .l | s .m :d .m | s :- .l | s :l .t \}$
 wish you a mer - ry_ Christ - mas, And a

$\{d' .d' :- | s :- | d :- | - :- | : | : ||\}$
 Hap - py New Year.

RING THE BELLS

ANONYMOUS

PERCY G SAUNDERS

Doh: G { | : : | : : | : : d | m : d : r | s, :- .s, | }

1. Oh, ring— the bells! Oh,
2. Oh, ring— the bells! Oh.

ring— the bells! We bid— you, sirs— good morn-ing; Give
ring— the bells! Good sirs— ac-cept— our greet-ing; Where

thanks, we pray—The flow'rs are gay, And fair— for your— a-dorn-ing,
we— have been, The woods are green, So hey— for our— next meet-ing.

3 Then ring the bells! Then ring the bells!
For this fair time of Maying
Our blooms we bring, and while we sing,
Oh, hark to what we're saying

4 Oh, ring the bells! Oh, ring the bells!
We'll sing a song with any,
And may each year bring *you* good cheer,
And each of *us* a penny

A VALENTINE

PERCY G SAUNDERS

Doh = Ab

Li - lies are white,

Rose ma - ry's green, When you are King, I will be

Queen Ro - ses are red. La - ven - der's blue, If

you will have me, I will have you.

CENTRE OF INTEREST—HOLIDAYS IN THE COUNTRY

XXIX. POND LIFE



CATCHING TADPOLES

Drawing in Outline of Picture No 34 in the Portfolio

Description of Picture No. 34.—This picture shows one of the ways in which Peggy and John amuse themselves during their holidays in the country. It is a warm, summer day. John is seated on the brink of a pond beneath a willow tree. He holds a fishing net which he dips in the water. Peggy stands behind him with a jam jar of water, which already contains several tadpoles. There are water lilies on the pond and rushes by the water's edge. A red squirrel is

perched on a branch of the tree over John's head.

The frieze for the classroom wall is made up of a tree and two squirrels nibbling nuts. Drawings in outline for tracing these shapes are given on pages 1110 and 1111. One third of the children will require whole sheets of drawing paper with tracings of the tree. Another third will need half sheets with tracings of the squirrel, while the remainder will have half sheets with tracings of the squirrel facing the opposite way.

LANGUAGE AND SPEECH TRAINING

Conversation on Picture No. 34.—The children should freely describe and discuss the picture. To stimulate thought and observation, and to bring to the notice of the children any points overlooked, the teacher may make the following suggestions—1. Tell in what place Peggy and John are. 2. Tell what John is doing. 3. Tell how he catches the tadpoles. 4. Tell what Peggy is doing. 5. Tell what is in the jar. 6. Tell what a tadpole is like. 7. Tell what a tadpole grows into. 8. Tell what tadpoles eat. 9. Tell whether it is winter or summer in the picture. 10. Name the tree that John is sitting under. 11. Name the little animal sitting in the tree. 12. Tell what a squirrel is like. 13. Tell what leaves and flowers are floating on the pond. 14. Tell what you see in the border under the picture.

During the conversation the leading words may be written on the blackboard, e.g., country, meadow, pond, pool, water, fishing, net, rod, jar, tadpole, frog, summer, willow, squirrel, red, bushy tail, water lilies, tree, nut.

The older children may copy these words into a book as a writing exercise, and the more familiar of them may be learnt as an exercise in spelling.

Flash cards.—The following sentences might be written on strips of card—

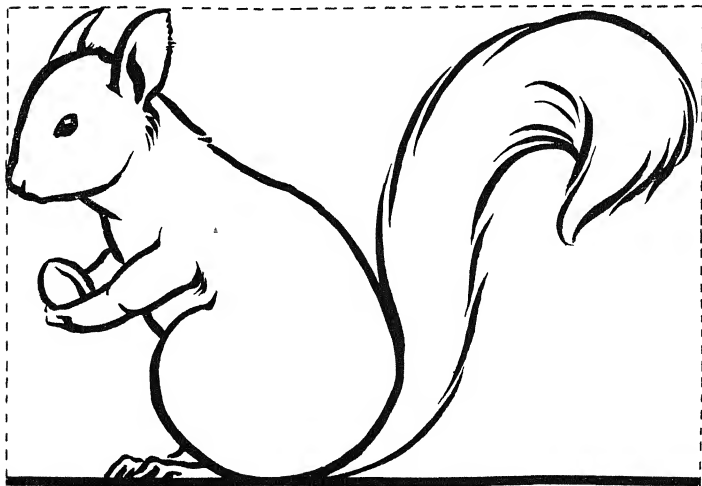
1. John is fishing for tadpoles.
John has a net
The net is made of muslin
John catches the tadpoles in his net.
2. Peggy is holding a jam jar
The jam jar has water in it.
In the water are some tadpoles
John caught the tadpoles.
3. John is Peggy's brother
Peggy is John's sister
They will take the tadpoles home.
They will watch the tadpoles grow into frogs.
4. Peggy will put water weed in the jam jar
Tadpoles eat water weed
Tadpoles also eat tiny worms
They soon grow into little frogs.
5. In the tree is a squirrel.
The tree is a willow.
The squirrel is red
It has a bushy tail.
It is fond of nuts.

Number.—Write the following sentences on the blackboard or on cards with the number-words omitted, and let the children supply the missing words with reference to *Picture No. 34*:—

1. In the picture there are — (*two*) trees and — (*one*) squirrel
- 2 In the border under the picture there are — (*four*) trees and — (*eight*) squirrels
3. Altogether there are — (*six*) trees and — (*nine*) squirrels.

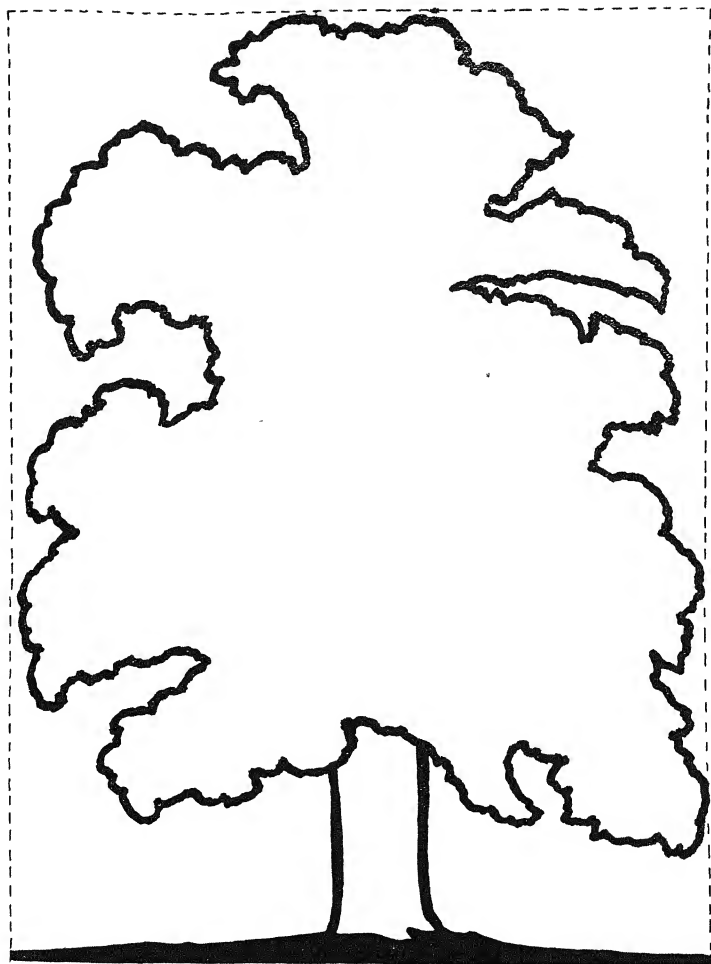
Rhyming words.—Read aloud the following incomplete rhymes and let the children suggest the final words —

1. The pretty red squirrel lives up in a — (*tree*),
A blithe little creature as ever can be
2. "Croak," said the toad, "I'm hungry,
I think,
To-day I've had nothing to eat or to
— (*drink*) "
3. A fair little girl sat under a tree,
Sewing as long as her eyes could —
(*see*)
4. "You are a funny fellow," said
A puppy to a snail,
"As far as I can ascertain,
You haven't any — (*tail*) "



TRACE-OUT FOR FRIEZE—SQUIRREL

Trace this Drawing for part of the Frieze, Picture No. 34.

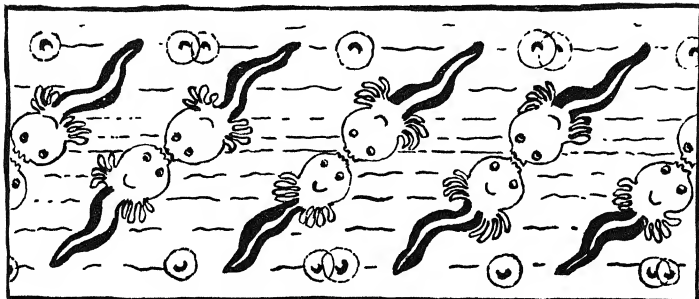


TRACE-OUT FOR FRIEZE—TREE

Trace this Drawing for part of the Frieze, Picture No 34

NATURE STUDY AND TALKS

LIFE HISTORY AND STUDY OF FROGS



Life history.—Frogs are called Amphibians, because they spend the first part of their lives in water, breathing dissolved oxygen like fishes, by means of gills, and in the adult phase they breathe atmospheric oxygen and live mainly on land; though they are limited to damp places because they still breathe partly through the skin, which must be kept damp.

Frogs lay their eggs in large masses in shallow water from late February to early April. They are fertilised by the male as they enter the water. This process is called spawning. The same thing happens in fishes. Each egg is nearly 2 mm in diameter, and has a black pole which is uppermost and a white pole which remains underneath. It is surrounded by a gelatinous mass which swells on entering the water, and merges with the adjacent ones. This is not edible, as some people imagine, but serves to space the eggs so that they do not press upon one another and so become deformed. It ensures that each has sufficient light and

air as it buoys them at the surface of the water. It makes all the eggs less liable to be washed away than if they were separate, and it possibly serves to prevent them from being eaten, as it is slippery to catch hold of.

The eggs begin to develop at once, becoming somewhat oval by the end of a week, and the head, body and tail can be recognised by the tenth day. The tail grows rapidly longer, and three pairs of small tufts, the first gills or breathing organs, grow outward from the sides of the neck. Three or four days later the tadpole will be seen wriggling about in its mass of jelly, and eventually it burrows a hole and bores its way out, through both the inner envelope and the jelly. It is then less than $\frac{1}{4}$ in long.

It has at first no mouth, but for a day or so attaches itself to weed by means of a little sucker or cement gland just under the head. Until its mouth breaks through, it feeds upon the yolk which it has absorbed.

from the egg by growing round it. It then breaks away, and begins to feed on the water weeds. The mouth is wide and horny, with rasplike projections on the lips. It eats ravenously. At a little later stage the long intestine coiled like a watch spring, which is capable of digesting a large quantity of vegetable food, can be seen through the thin body wall on the under side. The projecting end, and the faeces, are often mistaken by inexperienced observers for the beginning of the hind legs. This projection is, however, in the middle line. The eyes and nostrils appear shortly after the mouth.

At about the same time as the mouth, four pairs of gill slits appear perforating the pharynx to the exterior, these can be seen with a good hand lens, but would not be seen by children. They would, however, notice that the first-formed tufts of external gills disappear. This does not take place until the second set, or internal gills, are formed. These are fringes on the edges of the gill slits comparable to those of fishes, so that the tadpole is at this stage, a true fish. A fold of skin grows backwards over the gill slits forming an operculum, opening only by a small spout which can be seen protruding slightly on the left side. This is complete about four weeks after hatching, when the tadpole is about $\frac{3}{4}$ in. long.

The fish-like character is further indicated by the presence of a broad delicate fin situated along the middle line, passing from just behind the head, round the tail to the hinder opening of the food canal. This greatly assists the tail stroke by which the tadpole swims. The tail is very muscular, as it is in fishes.

At about four weeks old, or even earlier, the tadpoles seem to thrive better if provided with some animal food, either tiny "water fleas" and worms, or raw meat. They grow very rapidly, and at seven or eight weeks begin to change from black to a light yellowish brown, speckled with very dark brown, more like the colours of the adult frog.

In the fifth week the "buds" of the hind legs can be seen at the root of the tail. In the seventh week the joints can be seen, and in the eighth the toes. The front legs are also formed, but are still hidden by the operculum.

At about eight weeks old the tadpoles begin to come to the surface to breathe by using their newly formed lungs, though they still use gills as well. Gradually the lungs take the place of the gills, blood is withdrawn from the gills, and they shrivel up. It will be seen, therefore, that internal preparations are being made for the adult life before the actual change takes place. They may then be $1\frac{1}{4}$ in to $1\frac{1}{2}$ in long.

At about eleven weeks old the tadpole throws off its infant (or *larval*) skin, and a froglike body emerges, much thinner than that of the tadpole, with a high bony ridge on the back, larger eyes, wider mouth with no horny lips. The front legs are now revealed. All that remains is to get rid of the tail, which, in the economy of nature, is not shed, but *resorbed* into the body, thus providing it with a certain amount of substance.

But these final changes will not take place unless the tadpole can climb out upon dry land. If no land is provided, it must remain for ever a tadpole, and eventually die. In captivity the best way is to put the tadpoles (a few only) into a shallow unglazed plant-pot saucer, and bank it round with turf, arranging stones so that the tadpoles can climb out of their saucer. The home described for frogs is quite suitable, but an easy slope must be provided.

Keeping tadpoles.—The life history of tadpoles can best be treated quite informally, since they must be kept under observation for eleven or twelve weeks. A quantity of spawn should be put in a large shallow bowl, with weeds and some of the mud of the pond. Enamel or earthenware will serve the purpose. When the tadpoles hatch, the jelly should all be removed and the tadpoles put in the aquarium by them-

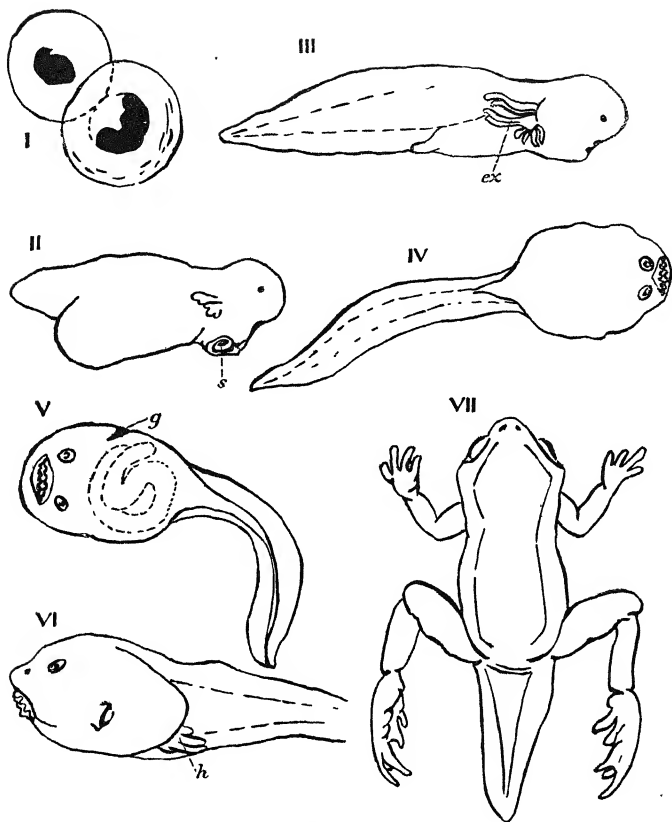


PLATE I

I. Eggs II. Newly-hatched tadpole s, sucker III. Tadpole breathing by external gills (ex) IV. Tadpole with no gills showing
 V. Tadpole from underneath showing coiled intestine and gill spout (g) VI. Tadpole from left side showing hind limb developing (h)
 VII. Tailed frog showing fore and hind limbs

selves. The tadpoles can be watched in turn by the children. At first they cling to water weeds by their suckers. Then their habit of "grubbing" in the mud very busily will be noticed. In this way they find a good deal of minute plant and animal food.

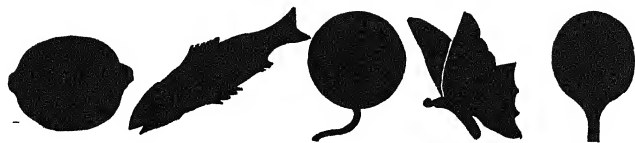
The date when the spawn is found should be recorded, and all the dates on which new stages occur. These are best entered on a wall chart. The children may either draw the tadpoles at various stages, or cut them out (free cutting without an outline) in black paper which can then be mounted. A frieze could be made by mounting them all on grey or greenish paper. They would be cut out considerably larger and thus often helps to secure a better shape and better detail. Without attempting any scale at this age, the children should try to show relative sizes as they progress. Each drawing or cutting should be labelled to say what it shows. This work could be interspersed with observations on other subjects, several things being examined in one lesson. Some of the observations might then be arranged together in one period, while the later ones might be taken at the same time as setting up a home for frogs and starting observations upon them.

At about four weeks old, the tadpoles may be fed daily with a piece of raw meat which is let down into the water by cotton and removed when it is quite white. As they grow larger, the tadpoles tend to eat one another and their number in a confined space becomes considerably reduced. Some leaves of the water plants should be arranged to float on the surface, as at about the eighth

week the tadpoles come to the top of the water to breathe.

When the four limbs appear the remaining tadpoles should be transferred to shallow unglazed flower-pot saucers (a few in each) set on a piece of turf. A number of stones should be heaped in and around the saucer so that the young frogs can easily clamber out. The water in the bowl will need to be renewed and the grass watered. As the young frogs now require small flies and other living food, it is best to arrange for the last stages of their development on a grass plot out-of-doors.

Making a frog's home.—Two frogs could be set up in homes. Wooden boxes are suitable, with all but a framework of the lid and two sides replaced by fine wire netting ($\frac{1}{2}$ in mesh), or the box may be turned sideways, so that the lid acts as a door, thus can have a panel of wire netting, and the box can be painted white inside, so that its contents can be easily seen. If possible a zinc tray should be fitted inside for easy cleaning (a sheet of perforated zinc can be bent up at the edges without tools). This should be filled with sods of grass, cut short so that the frogs can be easily seen, but with one or two longer tufts to give them shelter. A large shallow flower-pot saucer (9 in. or 10 in. in diameter) of water makes a pool, set into the grass. As before let the children arrange the home and feed the frogs. The grass will have to be kept watered and the water in the pool renewed. The tray can be removed and the grass watered from below. The frogs will usually eat mealworms and small earthworms.



LIFE STORY OF THE NEWT



NO child can resist a Newt. However many he may have crowded into his jam jar, he must have still one more. They are taken home in these close quarters, and then, fortunately for themselves, they usually contrive to slip out and silently steal away. It is therefore a good thing to appeal to children's sympathy on behalf of the newt, and to try to persuade them on the one hand, to watch the newts in their natural surroundings instead of trying to catch all they can find, and on the other hand, if they must bring them into captivity, to consider what they will need, and most important of all, to feed them. A newt is a debonair little being in his bright spring coat, swimming vigorously about the pond, remaining under water and then suddenly darting to the surface and projecting the tip of his snout to breathe, then diving again, and discernible instantly below the surface at the other side of the pond. But he loses the gloss and brilliance of his skin, and becomes listless, thin and pale, or at least dull, after a few days in captivity, even if he is given a large bath to compensate him for the wide spaces of the pond.

Newts spend the greater part of the year in damp ditches and fields near water, coming to the ponds only for the breeding season and remaining till about mid-June. After that, from being plentiful they become

rare. They hibernate, perhaps in a hole at the foot of a tree, or in a sheltered ditch amongst the decaying vegetation. On one occasion a small newt was found on removing some dead oak leaves from the forked roots of a tree in a London park. It was uniformly coloured exactly the same tawny colour as the leaves, and the skin had the same matt texture.

In the spring newts repair to the ponds, where breeding takes place. The eggs are laid singly by the mother on a leaf, which is then folded over the egg by movements of the hind legs. Usually a broad leaf, such as Water Cress or Bitter Cress is chosen, but sometimes they will use the narrow leaves of the Starwort and the egg can be clearly seen, a ball of colourless jelly about $\frac{1}{8}$ in. across, with a black speck in the middle.

A small colourless larva hatches out of the egg, more fishlike than that of a Frog, growing more slowly and nearly transparent. After some weeks it becomes delicately coloured and spotted. It has a wide transparent fin passing along the middle of the back, round the tail, and forwards along the ventral surface to the anus. This fin and the glistening, pale colouring make it look much like a fish, especially as it gleams silvery in the net. But as soon as it is placed in water it darts

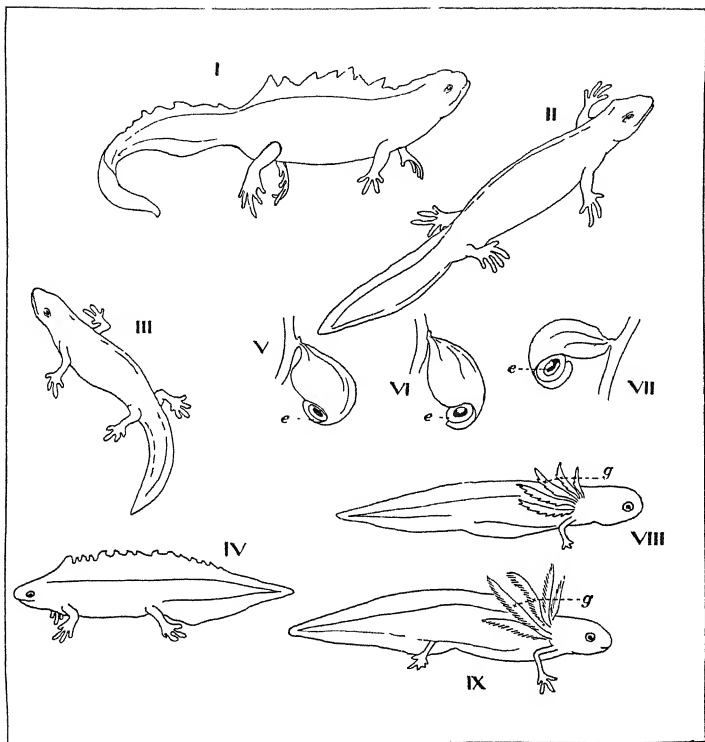


PLATE II.

NEWTS I Male Crested Newt II Female Crested Newt III Female Common Newt IV Male Common Newt V Watercress leaf wrapped round egg (e) VI Watercress leaf unwrapped to show egg (e) VII Leaf unrolling as egg develops VIII, IX. Stages in the development of the Newt "tadpole" g, gills

away with a lateral stroke of the body, and one can see that it has feathery tufts of gills projecting far back on the sides of the head. Later, two pairs of exceedingly frail-looking legs appear. For a long time growth seems to go no further. Indeed it is difficult to tell the exact age when further developments take place, for if the immature newts are kept in captivity, it is difficult to induce them to feed sufficiently, and normal growth receives a check. They must obtain plentiful supplies of small creatures in the pond. However, they will feed voraciously on water fleas if the supply can be steadily kept up, and later on small worms, "blood-worms" and ants' eggs. The mature newts will feed heartily on all these kinds of food, and are very fond of a diet of tadpoles.

Newts kept in captivity should be given an island on which they can bask, built up of large stones, with a tuft or two of grass above the water. The vessel needs to be closely covered, but no precautions will avail for very long, the newts are almost certain to escape after a time. It will be noticed that they are able to flatten their bodies against the glass and climb up the smooth sides and cling there, helped perhaps by the slimy nature of the skin.

Newts, like frogs, belong to the group of Amphibia. Though the long, slim body has a lizardlike appearance, they differ from reptiles in being covered by a smooth, thin skin through which accessory breathing takes place, with no outgrowths of the skin, either of scales, hair or nails, for the toes have no claws. It will be noticed that movements of the throat assist breathing, as in the Frog, for air has to be swallowed. The larva eventually loses its gills and breathes, like the Frog, by lungs. Very small teeth on the palate and edge of the upper jaw assist the newt in holding a slippery victim such as a worm, but they are of no use to bite or masticate, consequently the newt must swallow its food whole, and it frequently happens that it seizes a worm that is longer than itself,

and can be seen gasping and swimming violently about for ten minutes or more before the worm either wriggles out, or is swallowed in a series of great gulps. Very often two newts will seize one worm, when each will swallow half and they meet in the middle. Neither will give way, eventually either the stronger manages to pull the worm back out of the body of the other, or the worm occasionally is torn in two.

Male newts can be distinguished from the females by the crest which rises from the middle of the back. This is especially prominent in the breeding season, when the whole body is much more brightly coloured than that of the female, but at all times it can be detected.

There are two British newts, the Common Newt and the Crested or Warty Newt. The Common Newt has a smooth skin, pale brown above and light grey or white underneath, speckled with brown and yellow. In the breeding season the colour of the male deepens, and especially the under parts become a much brighter yellow, with more prominent spots. The Crested Newt is much larger, a dark olive green to black in colour, suffused with vivid orange, and spotted with black on the under surface, and has a much bigger crest in the spring. The female sometimes has a slight suggestion of a crest also. The skin is roughened by small granular dots, which give it the name of Warty Newt. It is about 5 in. long, whereas the Common Newt reaches only 3 in. or 4 in.

There is nothing new to say about methods of study, which would follow the lines indicated for the Frog. The life history is more difficult to follow through, but both teacher and children will have had some practice in observation, and in tending all kinds of small living creatures, so that with care there should be no difficulty in rearing the larvae and bringing them to maturity.

It is quite easy to obtain the eggs, for newts in captivity lay them quite freely if they are provided with a suitable rooted weed.

AN AQUARIUM

A CLASSROOM aquarium, which can be used for keeping tadpoles or for observing other water creatures, affords an interesting and instructive form of study.

A glass tank is by far the most useful and ornamental form of aquarium. The first essential is that the water shall be well aerated. It is not desirable to take out the inmates of an aquarium and refill the tank, as this disturbs and frightens the creatures and alters the temperature of the water. The only satisfactory way of maintaining the supply of oxygen in the water is by the presence of green growing water weeds.

A thin layer of garden soil is first laid in the bottom of the aquarium and covered with a layer of silver or birds' sand, or gravel, all of which must be previously well washed. Some water weeds must then be procured from a neighbouring pond. Water Crowfoot, Hornwort, Canadian Pondweed and Starwort as illustrated on page 1120 are all suitable. The lower ends of the weeds

are tied to small pieces of lead or stones, which are laid in the sand at the bottom of the tank. Other stones should be grouped together in the sand to make rocky hollows where the creatures may hide.

Pond or stream water should be used, if possible, and the water is best added through the rose of a watering can. Finally, a leafy twig on which larvae may crawl out should be stuck upright in the sand. It is advisable to have made a two-sided screen of green casement cloth which fits the two sides of the tank, so that the water can be shaded from bright light from a window or direct sunlight. A slight covering of Duckweed will help to shade the water. A small net for lifting out specimens and waste food should also be kept handy for use in the aquarium. (See illustration on page 1121.)

When studying pond life, other smaller jars containing rooted water weeds can be similarly prepared to house certain carnivorous creatures which would kill off others. All the "homes" should be fully prepared and the water plants growing well before specimens are added.

COLLECTING POND SPECIMENS



IF possible, it is advisable to take the older children to see a pond and to do some collecting of specimens under the teacher's guidance. Twenty children make

a large enough group to take at once, unless the teacher can have the assistance of another teacher, as the excitement is usually great. The rest of the class will

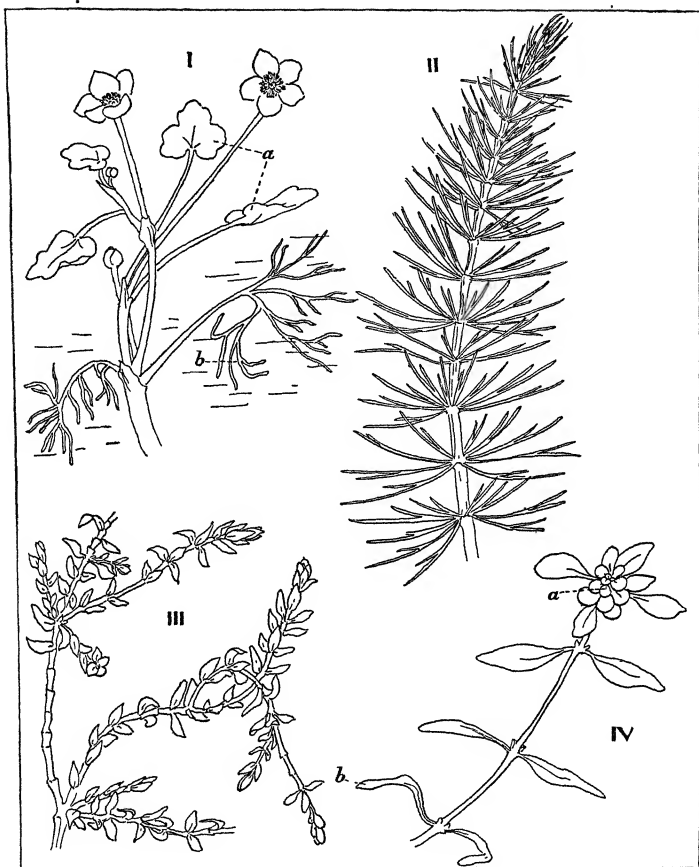


PLATE III.

PLANTS SUITABLE FOR THE AQUARIUM

- I. WATER CROWFOOT (*Ranunculus aquatilis*), natural size *a*, floating leaves, *b*, submerged leaves
 II. HORNWORT (*Ceratophyllum*),—branch, reduced size
 III. CANADIAN WATERWEED (*Anacharis*), natural size The plant is dark, stiff and glossy.
 IV. STARWORT (*Callitriche*), natural size *a*, floating leaves, *b*, submerged leaves

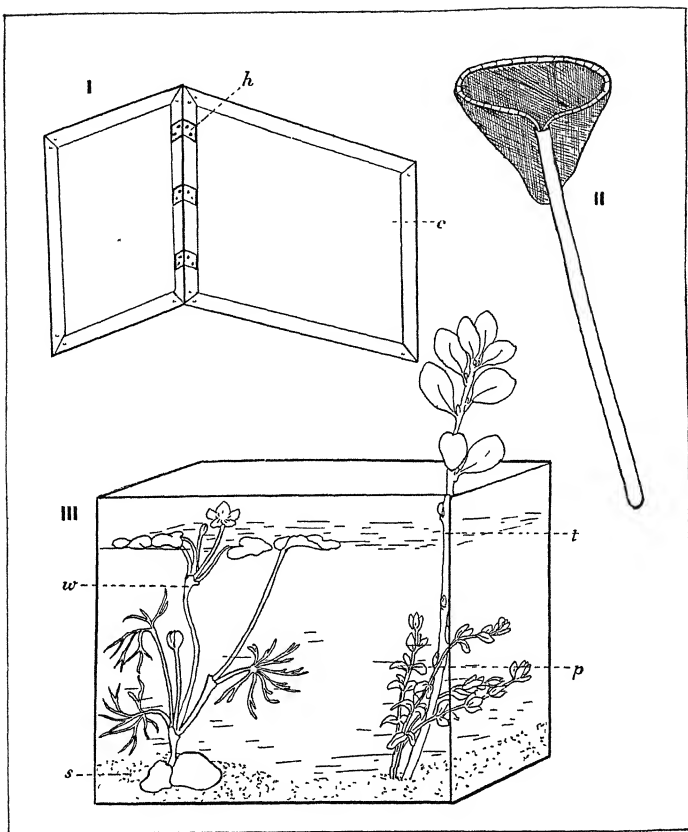


PLATE IV.

SETTING UP AN AQUARIUM

I Screen, having one long and one short side, with dark green casement cloth (*c*) stretched across it with drawing pins, *h*, hinges. II Small net, 3 in. in diameter, for lifting out specimens or waste food. III Aquarium set up, *s*, sand, *w*, Water Crowfoot, *p*, Canadian Pondweed—attached to stones or a piece of lead, *t*, leafy twig for dragon fly, may fly and caddis fly larvae to crawl out upon. N.B. Tank should not be overcrowded with weed.

need to be given work to do in school, and the teacher will need to take two expeditions, spending about three-quarters of an hour at the pond. She may have to make other visits herself to collect additional material, and she will certainly need to make a preliminary visit.

One net and one jam jar might be provided, and two or three small tubes or potted-meat jars for creatures which need to be isolated, for instance, beetles and their larvae, and dragon-fly larvae. The net can be made of fine net or muslin, or loose-meshed canvas, stitched on to a ring of copper wire bent into shape with the ends twisted tightly with pliers, and firmly bound round a walking stick or broom handle. It is advisable however, to have another net with a really strong frame (which dealers in naturalist materials will supply) so that it can be worked in forcibly amongst the roots of the weeds to dislodge beetles and large larvae clinging to them. Jam jars should have a string handle firmly attached to the neck, or one suggestion I have seen is to knit or net bags of macramé thread into which the jars will fit, thus lessens the risk of breakage.

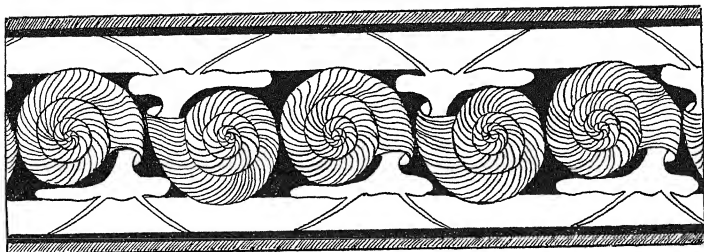
On arrival at the pond collect the children for a short talk on the conditions. Notice its aspect, whether it is sunny or shady, sheltered from winds or exposed. Then notice the plants growing round the edge, the bushes and undergrowth, then the water-loving plants such as Willow-herb, Figwort, Ragged Robin, then those which actually have their roots in water, such as Flags, Rushes and Reeds, then the floating Pondweeds (duckweeds and threadlike weeds) and plants with floating leaves, such as the Great Pond Weed and Water Crow-foot or Buttercup. Is the pond stagnant, or are there bubbles indicating springs?

Are there trickles of water indicating drainage through it?

Give the children some instructions as to the use of the net. Let each child use it in turn while the teacher controls its use. Before beginning to dip they should first of all watch the pond for a minute or two for any signs of living things. Newts, beetles and pond snails may be seen coming up to breathe, tadpoles and minnows or sticklebacks may be seen if there is a shallow margin, dragon flies, especially the small blue ones, darting and hovering over the surface or resting on reeds, many flies hovering about, pond skaters sliding quickly, and little steel-blue shining Whirligig Beetles dancing their rounds over the surface film of the water. The children should then be shown how to dip the net gently so as not to disturb the surface, or the creatures below it, more than is necessary, and to drag it gently along just below the surface. They may then dip more deeply, and push the net in amongst the rooted weeds, but not violently or ruthlessly, being careful not to break the plants or stir up the mud. A little disturbance is inevitable, but there is no need for the pond to look as if a party of hooligans had been visiting it. The teacher will identify the animals found and have the jars half-filled with water and a little weed. On the return to school she will supervise the sorting out of the animals and their disposal in the homes which should be already provided for them some days before so that the necessary weeds are established.

The best-known forms of pond life are firstly, the plant-feeding pond snails and caddisworms, which may be housed together, and secondly, the carnivorous great water beetle and its larva, the green larva of the demoiselle dragon fly, and the large larva of the great blue dragon fly.

POND SNAILS



POND snails are closely related to snails and slugs of the garden (see page 82). The clue to their life is that they have, like the garden snails, developed the power to live on land—especially they have developed apparatus for breathing atmospheric oxygen—and they have afterwards returned to the water life. They are frequently to be found exposed for long periods on weeds above the level of the water, and they can exist for some time on land, but like their relations they must have a damp atmosphere.

They cannot remain under water without coming to the surface to breathe, since there has been no re-adaptation to breathing under water. The time they remain under the surface seems to depend on their activity, and therefore on the amount of energy used. They may, when passive, remain as long as fifty minutes under water, but when feeding they come up to breathe frequently, for instance, once every two minutes, or once in every ten minutes.

House some snails in the prepared aquarium or in a large bath or tub where their wanderings can be watched. In addition, as many children as possible may have a snail put in a jam jar with a little water weed. The common pond snail (*Limnoea stagnalis*) is the best, it has a pointed shell about $1\frac{1}{2}$ in. to 2 in. long.

Tell the children that the Pond Snail is a relation of the Garden Snail; that the Pond Snail has gone back to live in water again, but it still has to come up above the water to breathe.

Let the children watch the snails and notice everything they do, trying to sketch them to show the various positions adopted. The lesson should be mainly informal, the teacher going round to discuss what is seen, and letting the children, in small groups, watch anything of interest in the behaviour of any snail. She would also suggest, by questions, what labelling should be attached to the sketches made, e.g., "Pond Snail crawling on the side of the jar", or, "Crawling on the underside of the surface of the water", or, "Opening its breathing hole above water."

The various things noticed would then be collected. They would probably include the following points:

1. The snails glide up weeds or up the sides of the jar, and slip from these on to the underside of the water surface so smoothly and gently that they do not cause a ripple.
2. After a time they might be seen to swing over (so that the *left* side would be uppermost) and project a very short spout, just breaking the surface film. At first

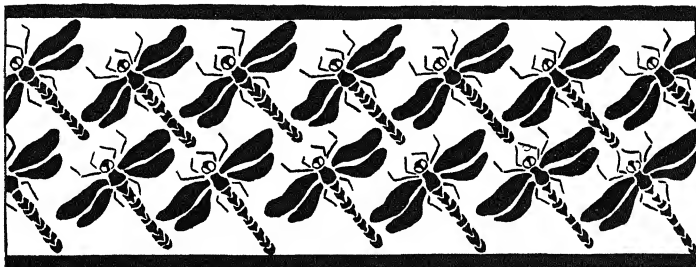
this looks like a pin prick, but in a moment it widens into an opening like the breathing hole of the Garden Snail. The short rim prevents the water from filling it. This seems to close suddenly. One can sometimes hear a little "pop," especially in a pond where there are many snails.

3. Probably the snail will then withdraw into its shell, and as the body then nearly fills the air chamber, it is suddenly heavier, and falls to the bottom. Sometimes snails are said to form a rope of slime and climb up and down it, attaching it to the surface and to some plant at the bottom.

The eggs are very common objects, often brought in with weeds, or laid in an aquarium

where snails are kept. The early stages of development and hatching of young snails, as well as their later growth, are easily watched. The eggs are much smaller than those of a garden snail, about $\frac{1}{8}$ in. across, and are laid in rows, many together, in a long, narrow sac of gelatinous substance, by which they are glued on to stones, leaves or stalks of water plants. This anchorage is useful in preventing them from being washed away, and the "jelly" is so slippery that it is difficult for fish or other creatures to eat it. The "jelly" also spaces the eggs so that each has room to grow, and has enough light, water, and air.

DRAGON FLIES



THE green larvae of the Demoiselle dragon flies are plentiful in most ponds. One or two larvae of the Great Blue Dragon Fly (known popularly as the "Horse stinger") can be obtained from a dealer if they do not occur locally.

A group of children might have two or three of the small green larvae in a dish. If a large one is available, it can be housed in a glass jam jar. Weed should be provided for shelter and for the insects to hold on to. The weed, too, helps to aerate the water.

The children should watch the movements and try to draw the larvae in characteristic positions. They should also be on the alert

for the casting of the skin, when the body assumes a much brighter colour, especially in the large larvae. They should notice whether the insect has to cling to weeds in order to remain at the bottom, and whether it ever comes to the surface and projects any part of the body. They will find in this case that the larva does not project the body; it is therefore fair to assume that it is in some way capable of breathing under water. In the Demoiselle larvae, the three thin, narrow plates projecting from the end of the body are able to breathe, i.e., to take dissolved oxygen out of the water. In the case of the large larvae, water

is sucked into the end of the food tube, and then forcibly expelled, and from this water the walls of the food canal are able to extract oxygen, giving up carbon dioxide. It is sufficient to tell the children that the larvae breathe through the end of the body, and that in the Demoiselle, the three leaf-like plates are connected with breathing.

The Demoiselle larvae will be recognised when they are captured amongst weeds, by their green or brownish-green, nearly transparent body, long and narrow, with a hammer-shaped head and large eyes. They wriggle in the net and usually suggest to the children the idea of shrimps, but as soon as they are put into water and dart away, it will be seen that they are insects. They swim by curving the body vigorously from side to side. They vary from $\frac{3}{4}$ in to about 1 in long, and the larger ones will be seen to have two pairs of small wings already developing. The body is divided into segments and has three pairs of short weak legs. At the end of the abdomen are the three projecting breathing leaflets already described. They are pretty, delicate-looking creatures, but their habits are voracious. They lurk amongst the weeds, sometimes stalking their prey, sometimes waiting until it is within jaw's length, for they have a peculiar extensible jaw which can be stretched out to almost half the length of the body. This is known as a *mask*, for when folded it completely covers the under side of the head and part of the thorax. It is hinged to the mouth and has another hinge or joint, so that the first part can be bent backwards under the body, and the second joint can be bent forwards on that again. This second joint is broad in front and bears a pair of pincer-like jaws. As the victim comes within reach the apparatus is shot forward, the jaws open and suddenly close upon it. At the same time the mask is retracted, bringing the prey close to the mouth, where it is torn up and pushed in.

The large larva may be $1\frac{1}{2}$ in or $2\frac{1}{2}$ in long, and as thick as a child's finger. It is

a dark muddy colour, except just after shedding its skin, when it is a bright, translucent green. It stalks with slow, stealthy movements, or clings lurking amongst the weeds. In captivity it will eat eight or more tadpoles a day (throwing away the crumpled skins), and seems always ready for small worms. It grows, like the small larvae by casting the skin, and then expanding while the new skin is still soft. It can be seen to draw the last segments of the abdomen in and out regularly, while at rest, and this is a definite breathing movement, in reality it is drawing in water. Sometimes, if the larva is taken out and then put back into a dish of water, it squirts a distinct jet of water from the end of the body, making a little waterspout.

There is no definite pupal stage in the dragon flies, but the wings gradually develop and internal changes take place. When the large larva is ready to change into the fly, the eyes become brighter. In the case of the small larvae, the body seems to become more opaque and solid-looking, and then the larvae are seen to be climbing up twigs out of the water. Twigs or reeds must always be fixed steadily in the dish, so that the larvae can climb out.

In both cases the skin splits down the back of the thorax, the body inside swells and widens the crack, which extends further, allowing the head and wings to be freed. Then the legs are drawn out by strong movements on the parts already free, and finally, by holding on to the old skin with the legs, the abdomen is curved away from it and drawn out. The larva stretches the abdomen and curves it away from the old skin.

But the body is still compressed and the wings crumpled. In a short time the wings can be seen to expand, and they begin to attain their iridescent colouring. The body and wings still take some time to harden, and it is probable that a pumping of liquid takes place to distend and shape the wings and abdomen, and that later this liquid dries up. Liquid has been observed dropping away from the abdomen

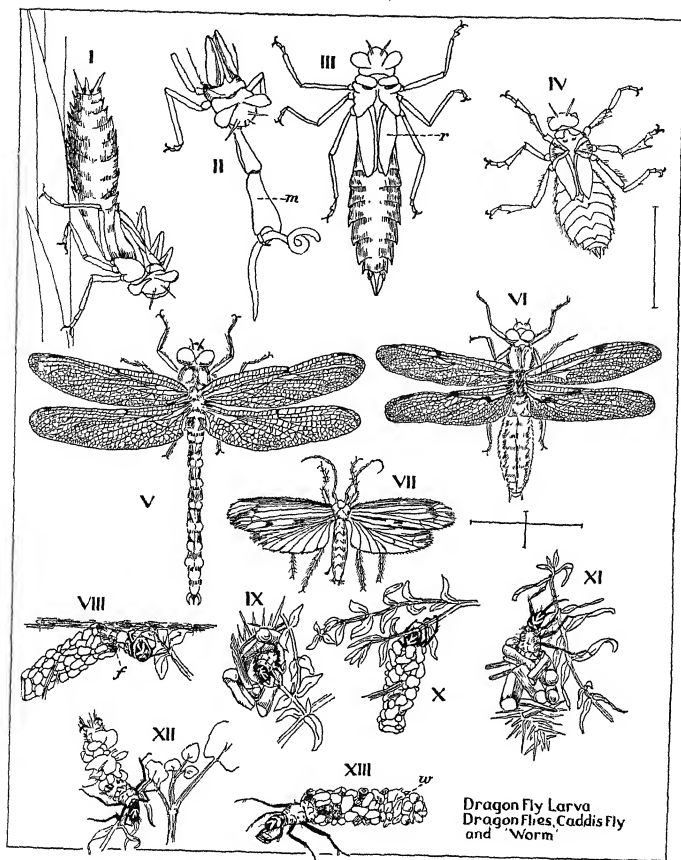


PLATE V

DRAGON FLY LARVA I Full grown larva of *Aeschna* (nat size) awaiting prey II Capture of prey, mask extended (*m*)
 III Full grown larva of *Aeschna* *r*, rudiments of two pairs of wings IV Larva of *Libellula* (line to right shows nat size)
 DRAGON FLIES V Dragon Fly—*Aeschna*—male VI Dragon Fly—*Libellula*
 CADDIS FLIES VII Caddis Fly (line to right shows nat size)
 CADDISWORM VIII At the surface of the water, breathing *f*, filaments for respiration IX Feeding X Clinging to
 weeds XI Crawling over weeds XII Constructing a case of bits of leaves XIII "Worm" and completed case of stones,
 beads and bits of watercress (*w*)

as it gradually gets thinner. The whole process takes about three hours in the large dragon fly, a shorter time in the small ones. Towards the end of this time the abdomen assumes its brilliant colour, but it has frequently been observed, at any rate with the small dragon flies, that if the change takes place indoors, in limited light, they do not attain their full depth or brilliancy of colour.

The colour of the Demoiselles is a deep azure, with iridescent wings shot with purple and green. The Large Dragon Fly is a deep, dark greenish blue, with bronze and gold lights in the sun, yellow spots on each side of the abdomen in the female and green in the male. The eyes are a deep greenish blue. It is curious to see the flies resting for a long time, especially as the light fails, apparently asleep but with wide-open, staring eyes. They feed on the wing like swallows or hawks, with a swift, strong flight. The two pairs of wings are long and narrow, presenting a long cutting edge to the air.

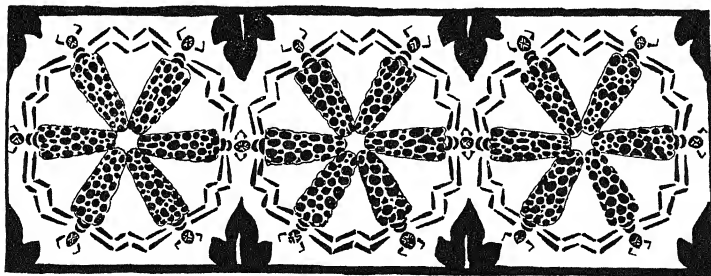
The small Demoiselles dart lightly but with equal purpose, over the ponds, coming

to rest on reeds, sometimes hovering over the water as if suspended there, for in strong light the transparent wings are often difficult to see. The eggs are dropped into the water as the insects hover over it.

There are many other British dragon flies, one a deep ruby colour, about an inch long (its Greek scientific name, *Pyrosoma*, means "fire-body").

A larva that occurs fairly often is a curious short, thick-bodied creature about an inch long, very broad, dull, muddy greenish-brown in colour, and often covered with particles of mud. Very short threadlike weeds may be growing on it. These foreign bodies serve to conceal it still further from its victims. It has the characteristic mask, otherwise it might not be recognised as a relation of the others. This larva turns into a rather thickset dragon fly with less brilliant and attractive colouring, and with proportionately shorter wings than the others described. It will be noticed that the larvae of both the dragon fly and the beetle, owing to their shape and colouring, are difficult to discern amongst the stems and narrow leaves of the water weeds.

CADDISWORMS



EVERYBODY knows the quaint little creatures called Caddisworms that carry their homes about with them, and utilise many kinds of materials to

construct them. They are distant relations of the dragon flies, for they are not worms at all, but the larvae of four-winged flies, which may be seen from May onwards.

resting amongst the grass and rushes, or often swept away on the current of small streams into which they have fallen after having laid their eggs. They are frail, greyish, dull-looking flies, about 1 in. to $1\frac{1}{2}$ in. across the wings, with long, delicate antennae, thin legs, a thin body and transparent wings.

The larvae of each kind, for they are very numerous, choose their own type of material for their tubes or cases, and different species are found in running water and in stagnant ponds. A few sweeps of the net will be almost sure to secure some of them, they may be narrow tubes of sand, $\frac{1}{2}$ in. to $\frac{3}{4}$ in. long, or they may be broad and irregular in shape, with small stones and shells stuck all over them, or with short lengths of stalks and bits of green leaves clipped off by the sharp little jaws. Some of the larvae make their case of two oval pieces of leaf stuck together, so that it is quite flat. Others make a raft by sticking on two or three pieces of twig much longer than the tube. (See illustration on page 1126.) In the net they will show no sign of life, though on looking into the case the insect can be seen withdrawn inside it, but almost as soon as they are put into water, a small, dark, horny head will peer over the edge, then a bunch of claws will emerge, and finally, three pairs of legs will project fully and the creature will begin either to swim or crawl. The small kind of Caddisworm which makes a mud tube will swim actively, carrying its shell horizontally, and may be seen to chase such things as very young May fly larvae, "bloodworms" or other soft creatures.

The best way to keep caddisworms is in a saucer or shallow bowl with a little of the pond mud and some floating weed. They live chiefly upon the vegetation and upon very minute animals found in the mud or on the surfaces of the weed, so that these will need renewing from time to time.

Let the children have a saucer containing several caddisworms, preferably of

different kinds. Let them watch and notice how the caddisworms move, and how rapidly they withdraw if touched. The children can see the horny head and three pairs of legs, the first pair very short.

Notice that after feeding for some days, the caddisworms withdraw into their cases and do not again emerge. If the case is then closely examined, without being disturbed, it will be found that the insect has anchored it to a weed, or to the saucer, by fine, tough threads. It has also closed the opening of the tube where the head emerged, or perhaps both ends, by a sort of fine grating of thread, or by a bit of leaf. When this occurs the Caddisworm has passed into the pupal stage, and the adult fly will soon appear. Provide some little twigs for the fly to cling to, or it may fall into the water and be drowned. The eggs are laid on weeds in a loop of jelly, something like those of the snail, but not glued down along their length.

The teacher might extract three or four larvae from their cases by gently prodding them from the back with a bristle, or a small pinhead, when they will leave the cases. Let the children see that they are soft-bodied, being protected from their enemies by the case. The body is jointed, and provided with tufts of white threads, by means of which they breathe,—for they are able to take oxygen from the water. A current of water constantly sweeps through the tube (which, it will be noticed, is open at both ends), and the dissolved air is used for breathing.

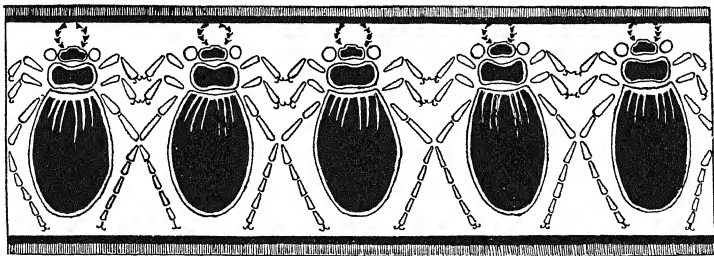
A little behind the head (on the fourth segment, or first abdominal segment) are three little knobs, which are pressed against the tube to keep the Caddisworm in place. On the last segment are two tiny hooks by which it is also hooked in.

Now put a variety of material into a saucer—a little fine sandy mud, some leaves, some water weeds with stalks, a little very

fine gravel—and put the larvae into it. Place this on the nature table and let the children have the opportunity of looking at it from time to time. The larvae will

soon begin to select material, bite off the sizes they require, and make themselves new cases, which they stick on the body with their jaws.

WATER BEETLES



HOUSE one water beetle, or a pair (be sure that they are male and female, or one will be killed) in a glass jam jar or tank already prepared with rooted water weed (see page 1121) having 6 in. or more of water. Put a larva in another prepared "home" in a jam jar.

Let the children notice all they can about the appearance of the adult beetles. They are about $1\frac{1}{4}$ in. long, with a horn-covered body, shaped rather like a shallow boat, flat on the back, and rowed along by a pair of very long legs which are fringed with bristles to give them a blade like an oar. These move quickly. They can also be used to steady the beetle when it is resting in one position. There are two other pairs of less conspicuous legs. The first pair are very short, turned forwards, and serve to hold its victim while the beetle tears it to pieces with its sawlike jaws, which project just under the head. (There are three pairs, two with branches, called *palps*, which serve as organs of taste and touch, but the details will not be distinguished by children. The palps may

be seen quivering just below the head, however.) A pair of feelers project from the angle of the head beside the eyes. These feelers are finely jointed. The legs are also jointed.

Three regions of the body can be distinguished—the head, thorax and abdomen. The legs are joined to the lower side of the thorax, the hard wing covers to the back of the second joint or segment, and the thin, delicate wings, folded under these covers, to the third segment. (The back is covered by the wing covers, but if a dead beetle is turned on its back, the abdomen is seen to be jointed. There is no need to trouble children with these details, however, unless they notice and ask about them.) The wing covers are grooved in the female, smooth in the male, there is a yellow band round their margins. The male is also distinguished by a pair of round pads on the front legs.

The beetle swims with vigorous, long jerks if disturbed, or if it makes a sudden dart at a victim, but if left alone it is to be found for long periods resting in an oblique position, balanced in the water

by its backward-directed long legs. From time to time it will come to the surface of the water and project the tip of the abdomen, raising the wing covers slightly, so that a stream of air can pass under the wings to the paired breathing pores (*spiracles*) situated on the back. A flat bubble of air can often be seen just beyond the wing covers at the end of the body. Children will notice the constant return to the surface, but it is so different from any mode of breathing known to them that it is impossible to infer what is happening. It has, however, been proved that this method of breathing is actually taking place.

In addition to observing these movements, it will be seen that the beetle cannot remain at the bottom except by swimming about or by clinging to weeds. It floats to the top. It is therefore, like the snails, lighter than water.

The children should time the visits to the top and notice the longest and shortest times that the beetle stays below without breathing.

The beetles should be fed on very small earthworms, tadpoles, "bloodworms" (found in water butts), occasionally scraps of raw meat, blow fly larvae ("gentles"). The beetle is a voracious feeder and the sight is not pleasant, but since children like to keep pond creatures at home, it is important that they shall realise that they *must* be fed on the right kind of food. In school, however, the teacher may prefer to feed them herself when the children are not present.

The larva.—The larva can be watched and its movements recorded in the same way. As it is a voracious feeder, it needs to be supplied daily, at intervals, with several small earthworms, "bloodworms" or tadpoles. Since it is covered by a skin hardened with *chitin*, a horny substance, it can grow only by shedding its skin periodically. The children should watch for this process. The cast skin should be placed in a watch glass standing on dark paper, where the

details of the structure can be clearly indicated in the cast skin. The body is long and slender, of a sandy colour, with a broad, almost triangular head, having small black eyes (really a cluster) at each corner of the broad front, and a pair of narrow, curved sicklelike jaws. These are in reality both piercing organs and tubes which can suck the blood of a victim. When in use, they fit into the corners of the mouth, which is kept tightly locked, and very rarely, if ever, opened, all the food passing as juice through the jaw tubes, which are pierced at each end.

When the larva comes to the surface to breathe it presses against the surface film two narrow, leaflike *styles*, attached to the last segment, and these act as a sucker and keep it suspended there. In order to catch its prey it lurks in the shadow of weeds, with its jaws open. Its sandy colouring and still posture make it inconspicuous, when a small worm or soft-bodied insect comes near the larva it makes a sudden dart and closes its jaws upon the prey, then sucks the juices and releases the shrivelled remains. Its position, head downwards in the water, with the body curved, the head slightly bent downwards, and the long thin legs and open jaws outstretched, is very characteristic. If disturbed, it moves through the water by a sudden violent contraction of the whole body, which shoots it some distance. It is so quick that the actual detail of the movement cannot be easily detected.

If full-grown larvae are obtained, they will require soil if they are to continue their development. The best way to arrange this is by placing an earthenware saucer of water in a convenient case (one with glass and perforated zinc sides and a zinc base is useful) and surrounding the saucer with a layer of soil up to the rim, and sloping upwards slightly to the sides of the case. Close-cut turf can cover the soil which must be kept damp. If the whole can be arranged in a perforated zinc tray which can be slipped out at the front, this can be sunk in water to moisten it when necessary.

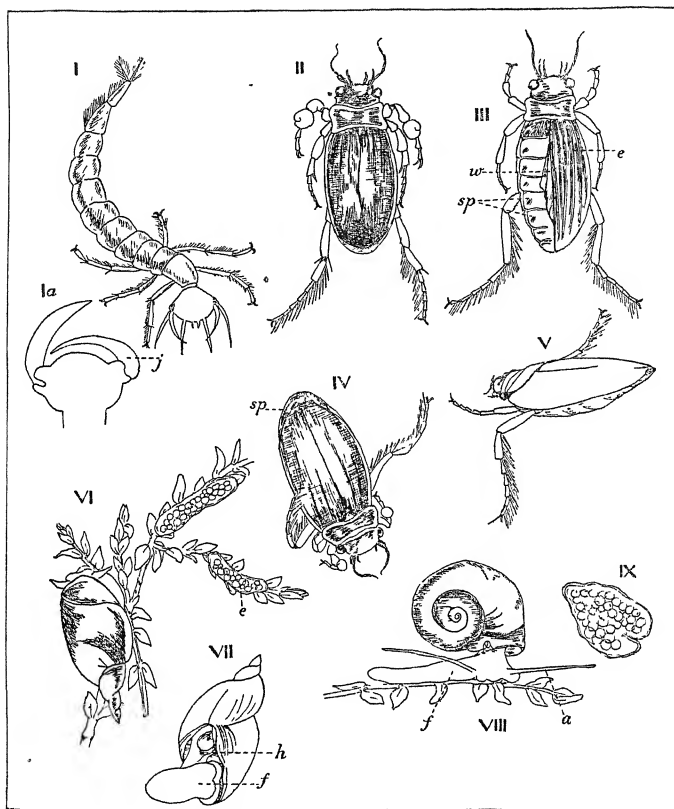


PLATE VI

GREAT WATER BEETLE (DYTICUS) I Larva. Ia Head of larva showing jaws (*j*) II Male beetle III Female beetle. *sp*, spiracles, *w*, wing, *e*, wing case (elytra) IV Beetle suspended from the surface of the water when breathing, spiracles (*sp*) take in air from atmosphere, elytra open V Beetle swimming, oblique position
WATER SNAILS VI *Limnaea*—feeding on water weeds, *e*, eggs of *Limnaea* VII *Limnaea* at the surface of the water when breathing *h*, breathing hole, *f*, foot VIII Common Trumpet Snail (*Planorbis*) crawling over water weed *f*, foot, *a*, antennae IX Mass of eggs laid in aquarium of Trumpet Snail

Stones and weeds must be arranged at one side of the saucer to allow the larva to creep out. One or two bits of twig may be placed slanting in the saucer, so that they project over the edge. These can be weighted with small stones. A simple way to make a "home" for a larva about to pupate, is to obtain an earthenware dish (the little dishes called "nappies" are suitable). Make a small perforated zinc tray to fit one side and fill it with soil, covering it with short moss or close-cut turf. Fill the dish with water and fit up as described. Cover with a glass plate. When the larva has found its way into the soil it will be necessary only to keep enough water in the dish to keep the soil damp. The larva will creep into the soil, make itself a hollow chamber, and there become quiescent, cast its larval skin for the last time, and become shorter. It lies in a curved position in the cell it has made, while the body is making internal changes, and then the pupa splits

its skin and the perfect insect emerges. It remains in the soil for some time before making its way back to the pond, as the skin is white and soft, and must become hard and dark coloured.

If the pupa is formed in the middle of summer, this stage may last only a week or two, but if towards the autumn, it will remain a pupa till the following spring—so this is another case of hibernation. The female beetle inserts her eggs in incisions in the stems of weeds. She makes the incision with a special sharp instrument enclosed in the abdomen. Thus the Great Water Beetle is an instance of an insect highly adapted for a life on land, returning to the water and spending the whole of its life there, except for the pupal period, yet remaining dependent on the air above the pond for breathing. In this feature the Great Water Beetle resembles the Pond Snail, which also exhibits no re-adaptation to breathing under water.

HOMES FOR GOLDFISH



Material.—The following are directions for making homes in school for four goldfish. The materials required are two straight-sided enamel bowls not less than 10 in. in diameter by 5 in. to 6 in. deep. A dish of sand, ready washed. Some water weed. (Canadian pond weed and Starwort are readily obtained and quite good.) A bowl

of clean water. A watering can or large jug of water which has stood overnight. A small jug or cup. A little Epsom salts and common salt.

Introduction.—Ask the children if they would like to keep some Goldfish, and tell them that they are going to have four, but

that it is necessary to make a home for them beforehand. Tell them that most of our goldfish come originally from China or Japan, where they live in fresh-water ponds and lakes, so that naturally they have plenty of water which is always being changed. Therefore we should give them as much space and water as we can. We must try to make a home for them as much like their own as possible.

Ask the children if they have watched either sticklebacks or minnows (give local names). Let them tell you all they can about the kind of place they are found in and what they do. Sometimes they remain in the sun for quite a long time, at other times they dart about among the weeds that give them shelter. The bottom of the pond is muddy or sandy. Then for our goldfishes' home what sort of conditions ought we to have?

- 1 It should be large enough and deep enough to give them plenty of room
2. It should have mud or sand at the bottom. Sand is easier to keep clean.
- 3 It should have water weeds growing in it, for shade and shelter (Largely for aeration, but the children do not know this)

Practical work.—Show the children the two bowls and place them on the table, so that all can see what is done. The rest of the material should be conveniently near. Show the sand, and explain that it has been washed by pouring water on it and pouring it away several times. The weeds will need washing. Let two children wash them in a pail of water, and two others make them into bunches of about six pieces, tied together at the lower end with cotton. The cotton is then wound round a small stone which is pressed into the sand, and so the weed is fixed and ultimately rooted. Instead of a stone, the stems can be nipped in a doubled strip of lead (2 in. by $\frac{1}{4}$ in. is large enough).

In the meantime, two other children can be arranging the bed of sand about 1 in. deep in each bowl. Employ as many children in turn as possible. Let others plant the weed, two or three bunches in each bowl. These should be arranged so as not to obscure the view. The larger stones are arranged as a little cave to give additional shelter. (If the bowl is to stand in the window, it should be protected against too strong sunlight by a paper screen.)

The bowl is then very carefully filled by pouring water from the little jug, letting it break its fall against the side of the dish so as not to disturb the sand. If it is not quite clear it can stand until the next day; if fairly coarse sand or gravel is used it does not usually rise. It can be cleared by standing the bowl in a sink and allowing water from a tap to trickle slowly in and overflow for some time, then the surplus is removed. It should always stand long enough to reach the temperature of the water the fishes have been kept in. A sudden change of temperature may cause a "chill" and render them liable to a fungoid disease.

Tell the children that the water in ponds is not quite tasteless like tap water, because it has passed over rocks and through the soil, and dissolved what we call *mineral salts*. These are good for the health of the fish, so many people put in a little Epsom salts, or sometimes ordinary salt to make up for their absence. Add a saltspoonful of each to the water.

Care of fish.—Arrange that all the children who wish may look after the fish for a day in turns, and make a list with dates. Then explain what should be done. Each day a good deal of water should be baled out with a small jug, and fresh added, which was drawn ready the day before.

The fish can be fed on tiny worms, scraped meat, or ready-prepared fish food or ants' eggs. It is best to give variety, with some fresh food. A small pair of forceps or scissors is best for giving them the meat,

which should be snipped off and fed to them individually by dropping tiny pieces ($\frac{1}{4}$ in) in front of them. Never leave any uneaten food in the bowl, or it will attract a fungus which may kill the fish. A small muslin net on a cane or galvanised wire frame should be made for skimming the surface, or a little sieve can be bought.

Once a week the fish should be put in another vessel while the bowls are drained,

their sides sponged, and they are refilled (This is best done by the teacher). If a tap and some rubber tubing are available this can be done by siphoning without disturbing either the fish or the bottom. An occasional brine bath is good, especially if the fish show signs of lassitude or lose the brightness of colour. Any fish attacked by fungus should be isolated. Brine baths may cure it.

Kate Harvey

NATURE STORY

THE ADVENTURES OF TEDDY THE TADPOLE

ONCE there was a pond, and not a very big one, where the water went lap-lap-lap when the wind blew, and the grasses all round went swish-swish. In the pond lived a tiny black ball. This tiny black ball was Teddy Tadpole. He was so very tiny that he did not know much, but was just as all little babies are. Teddy Tadpole lay in a cradle like any other baby, only his cradle was a blob of jelly, and Teddy was inside. There was nothing to do and nothing to eat in the cradle, so Teddy lay quietly at first. Soon Teddy began to grow. He did not keep his shape like a ball, he began to grow long, like a little fish.

As Teddy Tadpole grew bigger and bigger, he became hungry. He twisted and turned, and at last he squirmed his way out of the jelly, and was wriggling about in the water. Teddy was then a queer little creature with a big black head and a long tail.

Teddy Tadpole was no longer just a baby. He swam about in the water by flapping his tail from side to side. He played peep-bo with his brothers among the grass stems in the pond. He wriggled about in the mud looking for tiny things to eat.

One day, as he was wriggling in and out of the grass stems, Teddy Tadpole knocked into an old Water Beetle.

"Good gracious! Good gracious!" said Water Beetle. "You youngsters are always careless! When will you grow up?"

"Grow up!" cried Teddy. "I *am* grown up!"

"Pooh! Not you!" replied the Water Beetle. "You haven't even one pair of legs yet. Grown up, indeed!" And the Water Beetle paddled off.

"Legs?" said Teddy Tadpole to himself. "Shall I really have legs?" So he swam off to ask his brothers.

"Tell me," said Teddy to his brothers, "when do we grow up?"

"We *are* grown up," said they. "How much bigger do you want to be?"

"But we have no legs yet," said Teddy Tadpole.

"Legs!" they cried. "Legs! Who ever saw a tadpole with legs? What use would legs be to us? A tail is more handy, and graceful besides. We have never heard such rubbish." And they would not listen to any more.

But Teddy Tadpole was not sure. The Water Beetle was so old and wise, there was probably something in what he said. Teddy Tadpole hoped to meet him again. Meanwhile he wondered and wondered so much that he grew quiet and thoughtful. His brothers laughed at him.

"Hallo, Teddy! Still looking for your legs?" they said, when they passed him.

So Teddy Tadpole did not play with them any more, but went off to live in another part of the pond

Then one day Teddy felt a funny tickling inside

"Perhaps I am going to be ill," he thought, so he was very careful what he ate, and he rested on the mud a good deal.

The tickling went on and on, and Teddy Tadpole got quite worried. Then, one day, he happened to look down at himself, and

there were two little bumps growing out of him!"

"Why," cried Teddy, "I do believe they're my legs!"

And so they were. The bumps grew and grew till they made two nice little black legs. Then there was more tickling, and two more lumps came up and grew into two tiny front legs.

"Hurrah!" cried Teddy Tadpole. "I have got my legs!"



Teddy Tadpole
in his cradle



Teddy Tadpole with no legs



Teddy Tadpole with two legs



Teddy Tadpole with four legs



Teddy Frog

Soon after he met the old Water Beetle

"Good day," said Teddy Tadpole "You see that I am quite grown up now!"

The Water Beetle laughed "Grown up?" he said "Nothing of the sort! You're not out of the water yet." And he scuttled off, chuckling.

"What can he mean?" thought Teddy Tadpole "Out of the water? Where can that be?"

For, as Teddy Tadpole had always lived in the pond, he thought it was the whole world

So Teddy wondered and wondered some more. His legs grew bigger, and his tail nearly dwindled away.

Then Teddy Tadpole noticed that he began to feel very queer. He did not want to play or wriggle in the mud. He did not want to eat. The pond seemed dark and stuffy. One day he felt very queer indeed. He crawled to a grass stem and clung on there.

"I really think I *am* going to be ill this time," he said to himself.

Poor Teddy got worse and worse. He could not breathe very well and he could hardly see. He began to climb slowly up the stem towards the light.

Up, up, up. Teddy Tadpole felt a little better. Up, up, up. Yes, the higher he went the better he felt. He could breathe

and see better. Up, up, up. Then—pop! His head shot out of the water.

Teddy Tadpole gasped and blinked. He was in a new world that he had never seen. Green trees grew all around, the sun shone and butterflies danced over the water. Teddy Tadpole for the first time heard the water go lap-lap-lap, and the grasses go swish-swish. And, best of all, he felt well and strong again. He gave one spring, and jumped clear out of the pond and landed on the mossy bank.

On the edge of the water was his old friend, the Water Beetle.

"Hallo!" called out Teddy Tadpole.

Water Beetle looked up "Who are you?" he asked.

"Why don't you know me? I am Teddy Tadpole," answered Teddy.

The Water Beetle laughed like anything.

"Oh, no!" he cried "You're not Teddy Tadpole any longer. You are grown up now. You are Teddy Frog. We shall not meet very often now, you know. Good luck to you, and good-bye!" So saying, the Water Beetle dived down into the water.

Teddy sat still for a minute or two.

"What a wise old Beetle he is!" he thought "I should never have known I was a Frog."

Then he jumped away over the moss and lived happily for the rest of his days.

Kate Lay.

RHYMES AND POEMS

"CROAK" SAID THE TOAD

"Croak," said the toad, "I'm hungry, I think,
To-day I've had nothing to eat or to drink;
I'll crawl to a garden and jump through the
pales,
And there I'll dine nicely on slugs and on
snails."

"Ho, ho!" quoth the frog, "is that what
you mean—

Then I'll hop away to the next meadow
stream,

There I will drink, and eat worms and
slugs, too,

And then I shall have a good dinner, like
you."

Old Rhyme.

Note—This rhyme can be said by two children—one can be the toad and the other the frog. The children squat down near each other and *talk* their lines. The teacher can say, "'Croak' said the toad," and then the toad talks. The teacher then says, "'Ho, ho!' quoth the frog," and then the frog talks.

last line of each stanza. Children delight in community work of this kind. The lines for the groups of children can be written on cards, and each card can then be presented at the right moment. After the last line of the poem has been said, all the groups together say their respective noises—"Croak—croak," "Quack, quack," etc.

STRANGE TALK

A little green frog lived under a log,
And every time he spoke,
Instead of saying, "Good morning,"
He only said, "Croak—croak."

A duck lived by the waterside,
And little did he lack,
But when we asked, "How do you do?"
He only said, "Quack—quack."

A rook lived in an elm tree,
And all the world he saw,
But when he tried to make a speech
It sounded like, "Caw—caw."

A little pig lived in a sty,
As fat as he could be,
And when he asked for dinner
He cried aloud, "Wee-wee."

Three pups lived in a kennel,
And loved to make a row,
And when they meant, "May we go out?"
They said, "Bow-wow! Bow-wow!"

If all these animals talked as much
As little girls and boys,
And all of them tried to speak at once,
Wouldn't it make a noise?

L. E. Yates.

Note—This is an interesting but rather long poem for little children to learn. A bright child might manage it successfully, or it could be read by a child from the book. The class can be divided into five groups and each group in turn repeats the

A FRIEND IN THE GARDEN

He is not John the gardener,
And yet the whole day long
Employs himself most usefully,
The flower-beds among.

He is not Tom the pussy-cat,
And yet the other day,
With stealthy stride and glistening eye,
He crept upon his prey.

He is not Dash, the dear old dog,
And yet, perhaps, if you
Took pains with him and petted him,
You'd come to love him too.

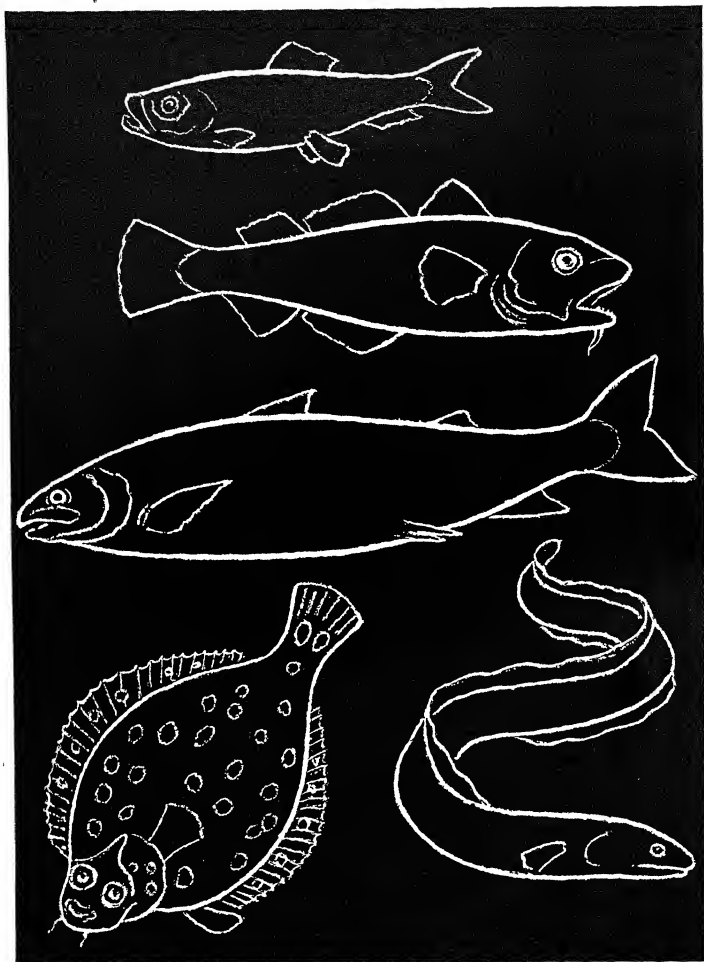
He's not a Blackbird, though he chirps,
And though he once was black;
And now he wears a loose grey coat,
All wrinkled on the back.

He's got a very dirty face,
And very shunning eyes!
He sometimes comes and sits indoors,
He looks—and p'r'aps is—wise.

But in a sunny flower-bed
He has his fixed abode,
He eats the things that eat my plants—
He is a friendly TOAD.

Juliana Horatha Ewing.





HERRING

COD

FISH
SALMON
1138

PLAICE

EEL



TADPOLE

FROG

NEWT

TOAD

SONG

A FROG HE WOULD A-WOOING GO

OLD RHYME

PERCY G. SAUNDERS

Quickly
Doh=A

1 A frog he would a -
2 So off he set in his
3 "Please Mis - ter Rat, will you

- woo - ing go, Heigh - o! says Rol-y; Whe-ther his mo-ther would
coat and hat, Heigh - o! says Rol-y, And on the way he
go with me?" Heigh - o! says Rol-y, "Good Missis Mou - sie

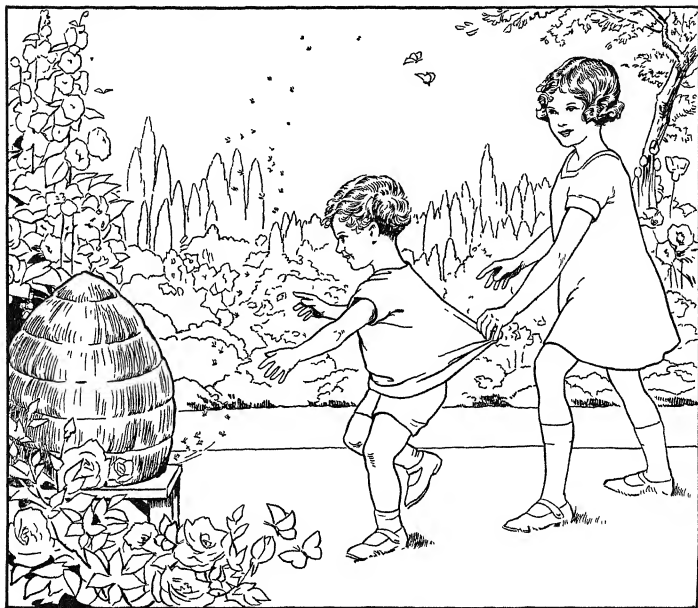
let him or no,
met a rat, } With a ro-ly-po-ly, gammon and spinach, Heigh-o! says Anthon-y Rol-y.
for to see?"

A FROG HE WOULD A-WOOING GO

4. When they came to the door of Mousie's hole,
 Heigho! says Roly
 They gave a loud knock, and they gave a loud call,
 With a roly-poly etc.
5. "Please, Mrs. Mouse, are you within?"
 Heigho! says Roly
 "Oh, yes, dear sirs, I am sitting to spin",
 With a roly-poly etc.
6. "Please, Mrs. Mouse, will you give us some beer?"
 Heigho! says Roly.
 "For Froggie and I are fond of good cheer,"
 With a roly-poly etc.
7. "Please, Mr. Frog, will you give us a song?"
 Heigho! says Roly.
 "But let it be something that's not very long,"
 With a roly-poly etc.
8. But while they were making a terrible din,
 Heigho! says Roly.
 The cat and her kittens came tumbling in,
 With a roly-poly etc.
9. The cat she seized Mr Rat by the crown,
 Heigho! says Roly.
 The kittens they pulled Mrs Mouse down,
 With a roly-poly etc.
10. This put Mr. Frog in a terrible fright,
 Heigho! says Roly.
 He took up his hat and he wished them goodnight
 With a roly-poly etc.
11. But as Froggie was crossing over a brook,
 Heigho! says Roly.
 A lily-white duck came and swallowed him up,
 With a roly-poly etc.

CENTRE OF INTEREST—HOLIDAYS IN THE COUNTRY

XXX. INSECTS AND SPIDERS



TAKE CARE!

Drawing in Outline of Picture No. 35 in the Portfolio

Description of Picture No. 35.—A delightful flower garden is depicted. Roses, hollyhocks and poppies can be identified among the riot of coloured blooms. On a strip of green lawn stands an old-fashioned beehive with a stream of bees leading from the tiny doorway of the hive. A little boy, full of interest, is trying to examine the hive more closely, but a watchful sister holds him back by the tail of his tunic.

The frieze below the picture consists of a honey pot surrounded by wasps. Trace-outs of the units of the frieze are given on pages 1144 and 1145. One third of the children will require whole sheets of drawing paper with a tracing of the honey pot. The other two thirds will require half sheets with a tracing of two of the wasps.

LANGUAGE AND SPEECH TRAINING

Conversation on Picture No. 35.—The children should freely describe and discuss the picture. To stimulate thought and observation and to bring to the notice of the children any points overlooked, the teacher may make some of the following suggestions—1 Give a name to the little boy; e.g., *Tom*. 2 Give a name to the girl, e.g., *Hilda*. 3 Tell what Tom is trying to do. 4 Tell what Hilda is doing. 5 Find the bees in the picture. Tell where they are going. 6 What do we call a bees' house? 7. Tell what a beehive is like. 8 On what is the beehive standing? 9 Who is saying "Take care!"? 10. Why does Hilda say "Take care!"? 11 How many butterflies can you see in the border under the picture? 12 Are the insects in the border bees or wasps? 13 Which make honey—bees or wasps? 14 Which like to eat honey—bees or wasps? 15 What other things do wasps like to eat? (Caterpillars, fruit, flies)

Flash Cards.—The following sentences might be written on strips of card—

- 1 Tom is a little boy
Hilda is his sister
Tom and Hilda are in the garden
There are pretty flowers in the garden
- 2 Tom runs to catch the bees
The bees live in the beehive

Hilda holds Tom back
The bees will sting.

- 3 The bees make honey
They get the honey from flowers.
They put it in the hive.
Tom's father will take the honey.
- 4 The honey will be put in pots.
Tom and Hilda like honey.
Wasps like honey too.
They will take it from the honey pots.

Missing words.—Say such sentences as the following for the children to supply the missing colour-words—

1. Hilda wears a — (yellow) dress
2. Tom wears a — (blue) suit
3. The hive is painted — (yellow)
4. In the garden there are — (pink) roses and — (pink) hollyhocks
5. The grass is — (green)
6. The sky is — (blue)

Names of groups.—The older children should be asked to give the group names for the following, and these they can then write in their *Word Books*—

1. bees, wasps, butterflies, — (insects)
2. hollyhocks, roses, pansies, — (flowers)

3. carrots, turnips, potatoes, — board, or preferably on *Flash Cards*, for use on a future occasion. Write down (or name) the word that does not belong to its group —
 (vegetables)
 4. sparrows, canaries, starlings, —
 (birds).

What is wrong in these groups.—This is a useful exercise for older children. Each group of words should be dealt with separately by writing the words on the black-

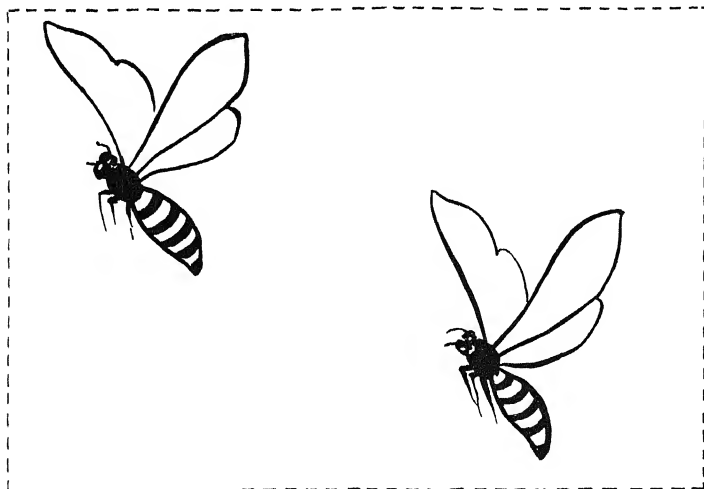
- 1 bees, honey, wasps, butterflies
 2 roses, pansies, turnips, hollyhocks.
 3 carrots, pinks, potatoes, peas
 4 canaries, blackbirds, frogs, ducks.

ACTIVITIES AND CONSTRUCTIVE WORK

Paper cutting—hanging butterflies.—Children of all ages will delight in making gay butterflies to decorate the classroom. Trace-outs of two different kinds of butterflies are given, on pages 1154 and 1155. The teacher cuts out two or three shapes of each kind of butterfly in cardboard, then

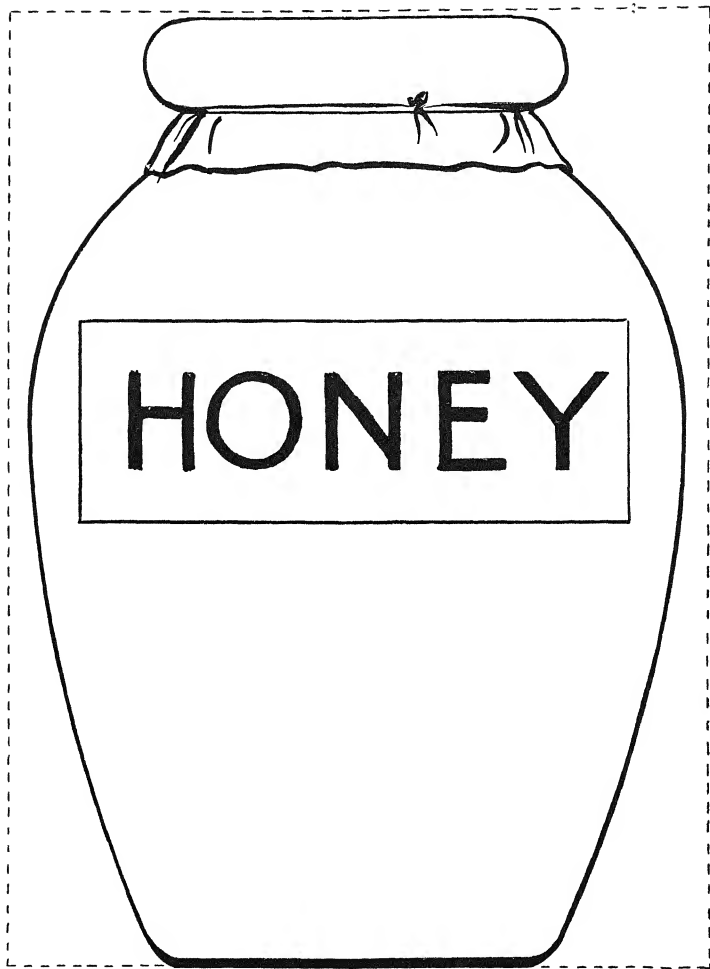
cuts each shape in half along the middle line of the body. These cardboard half shapes will be used by the children in making their butterflies, the shapes can be passed on so that it will not be necessary to make one for every child.

Each child should have a half sheet of



TRACE-OUT FOR FRIEZE—WASPS

Trace the Drawing for part of the Frieze, Picture No. 35



TRACE-OUT FOR FRIEZE—JAR OF HONEY
Trace this Drawing for part of the Frieze, Picture No. 35
1145

drawing paper Fold the paper in half, place the cardboard butterfly half-shape on the paper with the middle body line along the fold. Draw round the cardboard shape, then pass it on. Cut out the half shape from the folded paper. Open the paper and colour the butterfly on both sides with water colour or crayon. The children may use what colours they please, or try to copy living specimens exhibited in the classroom.

The sketch shows how to hang up the paper butterflies. Take two threads of equal length and with a needle pass them through the wings, one each side of the body. Knot together the ends of each thread, thus making two loops. Pass a third thread about 3 in. long through the two loops and knot it loosely once. Hold up the butterfly by the two ends of the thread, pull the butterfly till it hangs level, then draw the knot tightly, leaving two free ends with which to tie the butterfly to a cord stretched across the classroom. By this method the butterflies will hang level and steadily even in a draught, and they can be tied to the cord, one by one, as they are made. If the children choose their own lengths of thread for the loops, the butterflies will hang at varying distances from the cord, giving a pleasing effect.

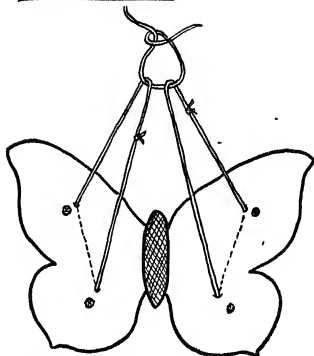
Alternatively, paper butterflies may be pasted on the back of a strip of wall paper to make a frieze, or used for decorating book covers, etc. In this case they will be coloured on one side only, or coloured paper may be used.

Paper cutting—pattern of butterflies.—Take a square of coloured paper, fold it into quarters and then once diagonally, as shown in the sketch. Draw the shape of half a butterfly on the folded paper, with the middle line of the body along the folded diagonal side of the paper. Cut out the half shape, leaving the tip of the upper wing uncut so that the pattern will not fall to pieces. Open out the paper and mount the pattern on paper of a contrasting colour.

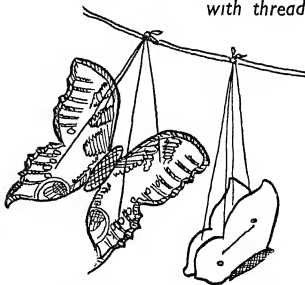
Paper picture—bees and beehive.—The making of this picture provides an enjoyable exercise for the Fives and Sixes. The teacher



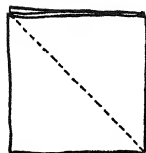
cardboard template.



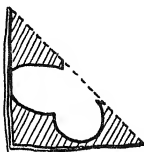
how to hang up butterfly with thread.



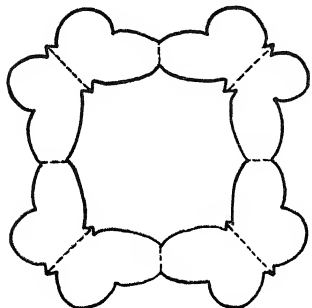
suspended paper butterflies.



*how to fold
square of paper*



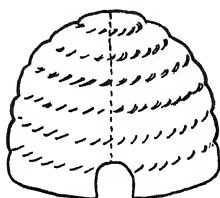
*how to draw &
cut out butterfly*



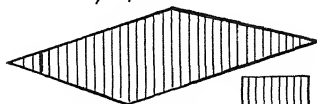
unfolded pattern of butterflies

prepares the picture, using the back of a large sheet of wall paper as the mount. Colour the upper part of the mount blue and a strip at the bottom green. Then from light brown wrapping paper, cut a beehive as shown in the sketch. Mark the ridges on the hive with charcoal and cut out the door. Cut a table and pedestal separately out of dark wrapping paper or wall paper. Stick the pedestal first on the mount so that their lower edges coincide. Paste the table over the top of the pedestal, and, finally, stick the beehive on the table.

The children prepare bees to fly round the hive. Each child requires quarter sheets of yellow paper and white tissue paper. To make a bee, cut the body from a small square of yellow paper folded in half, as shown in the sketch, and mark stripes in pencil on the wider end. Cut the wings



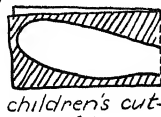
*Teacher's cut-out of bee-
hive, from folded light
brown paper*



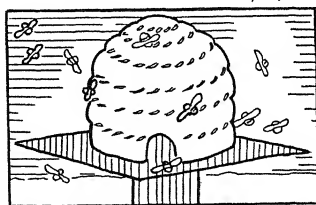
*Teacher's cut-out of table from
dark brown paper*



*children's cut-
out of bee's
body, from
yellow paper*



*children's cut-
out of bee's
wing, from
white tissue
paper*



*paper picture of bees and
hive.*

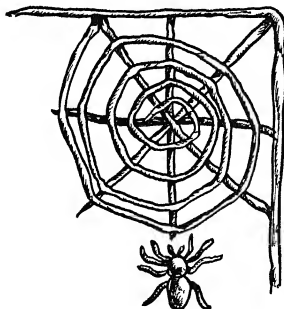
from the folded strip of tissue paper, as shown, put a dab of paste between the wings and attach them to the top part of the yellow body

The children paste the underside of the bees' bodies,—leaving the wings free—and stick them where they please on the teacher's picture.

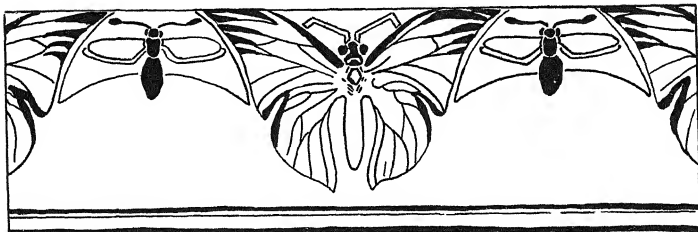
Model with odds and ends—moth-ball man.—Take a rectangle of net or muslin and fold it into quarters. From the folded material cut out half the shape of a man, without the head, open the material to half, and oversee the sides of the figure with wool, leaving the neck open. Drop in small moth-balls and fill the legs and arms of the figure with them. Cover an oak-apple with white or pink material,—or stuff a tiny round bag,—and paint the face on it, with the raw edges of the material upwards. Fringe the raw edges of the material for hair, or make a paper cap and stick it on the head. Draw up the neck of the figure and sew the head to it. Tie a strip of material or ribbon round the neck, making a loop at the back.

Plastic model—spider and web.—Roll out a number of thin "worms" from small balls of clay or plasticine to make the web. Build the web on the corner of the modelling board, or upon a right angle made with "worms" of clay or plasticine, starting with the straight supporting threads. Make

the spider's body from two balls of plasticine and its legs from eight little "worms". Add two tiny "feelers".



NATURE STUDY AND TALKS



STUDY OF THE CABBAGE WHITE BUTTERFLY

General characteristics of insects.—Insects belong to the group of Invertebrates called *Arthropoda*, because they have jointed legs. The whole body and legs are encased in a horny skin of a substance called *chitin*, arranged in overlapping plates on the upper and under sides of the body and round the legs. The body is divided into, usually, thirteen segments, covered with these plates. These are usually partially fused together, so that three distinct regions are formed.

The head is hard and smooth, provided with eyes, a pair of jointed feelers or *antennae* also covered with chitin, and three pairs of jaws varying in pattern according to the method of feeding. Although these structures are called jaws, they are not inside but outside the mouth, and are more like tiny modified legs, but with biting or gripping edges, or are transformed into sucking tubes or pumps. They are arranged in pairs on either side of the mouth, and if they remain separate, work sideways, using the rigid head as a fulcrum against which to work.

The thorax consists of three partially fused segments, and supports three pairs

of legs and the wings. The armour of chitin, besides protecting the internal parts of the body, serves as an external skeleton (or *exoskeleton*) to which the muscles are attached and upon which they work. It will be seen that in all flying insects, and they are the majority, it is important that the wings shall work from a rigid base. This is provided by the fusion of the chitinous plates covering the thoracic segments. It will be noticed that this part of the body is usually the thickest in insects. This is because it consists largely of the strongly developed flight muscles (especially noticeable in the Hawk Moths and Dragon Flies, the latter being insects of prey in their habits in relation to other insects, and swift, strong fliers).

The abdomen is the remaining part of the body, usually with the segments free. It has no legs or other appendages, except, possibly, on the last segment leaf-like or thread-like outgrowths called styles.

Specialisation for flight is helped by the peculiar division of the life history of insects into three distinct phases, so that different activities can be carried on at different periods. In the butterflies and moths the egg hatches into a *larval* stage, the caterpillar, which devotes itself entirely

to feeding. (Larva—a young stage which differs in structure from the parent, e.g., a tadpole, a “maggot” or “grub,” a caterpillar.) From time to time it sheds its skin, and in the interval grows larger. The new skin then hardens.

When large reserves of food have been stored the caterpillar passes into a resting stage or becomes a *pupa*, the *chrysalis*. Although quiescent, this is in reality a time of great internal change and strain, and there is a high mortality. The whole caterpillar body is reorganised. The pupa is covered by a horny skin, through which, if no cocoon or wrapping is formed, the wings and legs of the developing butterfly can usually be seen, pressing upon it.

The pupal skin is cracked and the fully developed butterfly or moth emerges. This is called the *imago*. It is free to fly, and its only duty towards the race is to lay eggs. Curiously, in many insects, this duty absorbs the imago life completely. The power of flight enables the insect to select a suitable spot for its eggs, and after laying them, the majority die, though late broods of butterflies and moths, e.g., the Small Tortoiseshell Butterfly, hibernate till the spring before egg-laying. In some of the gnat-like insects the imago is even unable to feed because it has no mouth.

The wide range of food chosen by insects, both in the imago and the larval stages, gives them their economic importance. Many of them become plant pests, by stripping leaves, burrowing into wood, and causing deformities in growth. Others become animal pests, feeding upon their blood and in some cases conveying and injecting the germs of disease, such as Sleeping Sickness and Malaria. The Ichneumon flies make a speciality of laying their eggs in the bodies of grubs; thus they may be incidentally useful to man in checking certain plant pests, such as caterpillars of the Larch Fly and the Cabbage White Butterfly, which are particularly liable to be attacked by an ichneumon whose small yellow fluffy cocoons cover its surface in the late autumn.

Collecting specimens.—To study the life history of the Cabbage White or Large White Butterfly, the eggs should be looked for in May, and kept so that the development can be watched before any lesson is taken. They occur as neat little patches, regularly arranged, rather flat, greenish white, on the backs of cabbage leaves in May. They will hatch out if kept in jam jars with gauze tied over the mouth, and if supplied regularly with fresh cabbage, will develop easily. From time to time they will cast their skin.

The caterpillars, well-grown, can usually be found amongst the outer leaves of cabbages by the middle of June. They will continue to grow and shed their skins in captivity. A jam jar containing a caterpillar and some fresh cabbage leaves should be available for every two children.

The Caterpillar.—Let the children describe what the caterpillars do. How they walk. Muscular movements of body. Movements of feet. Movements of the head, and the pair of tiny black jaws, by which it seems to feel its way and decide which way to go.

Notice the feet. Three pairs of small black pointed feet underneath the body on the three joints just behind the head. It often rears its body up and feels round with these. Further back, other feet, of a different shape, short and stumpy.

How many, and on what joints? (Four pairs, then a gap of apparently one joint, and an end pair on the last joint.) The four pairs are called *prolegs*, and the end ones *claspers*, and it can be seen that they grasp the edge of the leaf and help to support and drag the body along. The three front pairs actually walk, or make the new steps. The claspers and prolegs magnified, show tiny hooks.

Notice the colouring. The body is green, shaded on the sides with yellow, and dotted with minute raised black spots (tubercles) from each of which springs a stiff short hair.

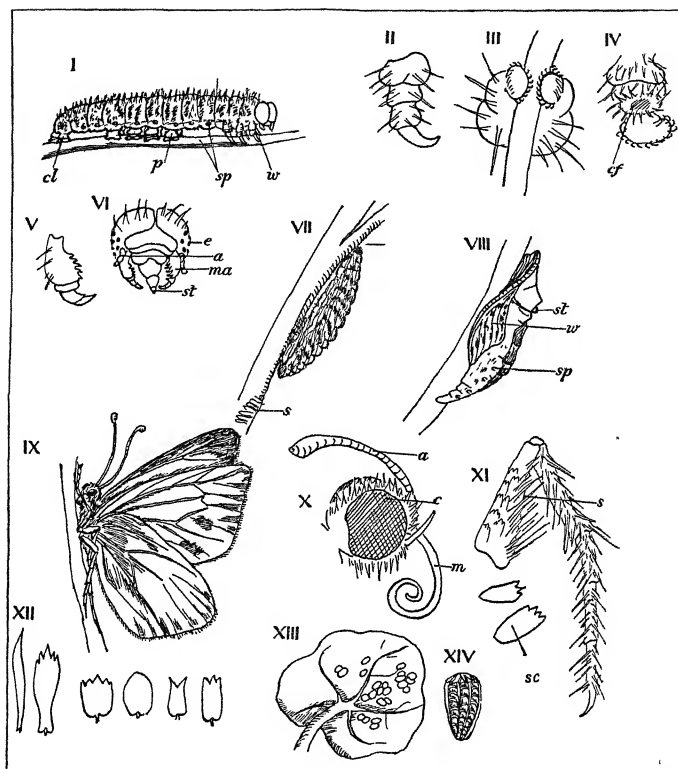


PLATE VII.

I Caterpillar *c*, clasper, *p*, prolegs, *m*, walking legs, *sp*, spiracles II Walking leg of caterpillar III Clasper seen from underneath, showing how it is used IV Proleg seen from the side showing the cushioned foot (*cf*) V Mandible or jaw of caterpillar VI Head of caterpillar *e*, eyes (6 pairs), *ma*, mandible, *a*, antenna, *st*, spinneret VII Caterpillar awaiting chrysalis stage *s*, silk ladder VIII Chrysalis, *st*, ring of silk, *w*, wing, *sp*, spiracle IX Butterfly X Side view of head of butterfly *a*, antenna, *m*, proboscis, *c*, compound eye XI Fore leg of butterfly *s*, stiff hairs, *sc*, scales XII Scales from wing of butterfly XIII Eggs on the under surface of a nasturtium leaf XIV Egg ($\times 25$)

Make an enlarged drawing, at least three inches long, to show the body, with its segments, the legs, the head, the tiny black jaws. Indicate actual size by a line. (The eyes and short antennae are too small to be seen. The sides of the head, which are large convex swellings, should not be mistaken for the eyes.) A separate large drawing of one walking leg, one proleg and one clasper should be made. Part of a cabbage leaf may be drawn before and after a caterpillar has fed upon it, to show the bites it has taken.

The larva.—Records of growth, changes of skin, and the change from caterpillar to pupa should be made on a nature chart. When the caterpillar is full grown it ceases to feed, and can be removed to a small wooden box with two sides covered with net, or to a plant-pot saucer over which a framework covered with muslin or net is erected, thin enough to be seen through. Here it will find a corner, and begin to weave from its mouth a thin mat of fine white silk threads, drawn out by first pressing the head against the surface and then gently swaying it backwards and forwards, pressing the silk down from point to point. This mat passes under the body. A girdle of several threads is then woven across the middle of the body, so that the caterpillar is surrounded by a loop. If it is in a crevice its head will usually be directed upwards, if not, it may be head downwards, swinging in its loop.

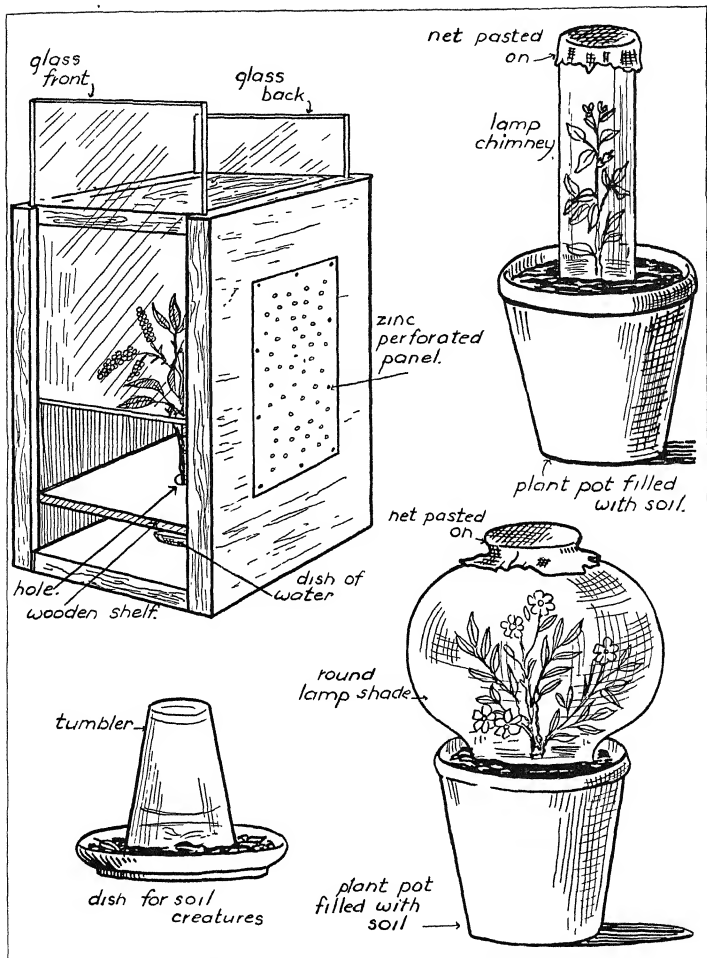
The body now stiffens and shortens, then the caterpillar skin splits behind the head and is wriggled off. Inside it is a pale greenish yellow or cream-coloured pupa, powdered with black dots. It is angular, rounded in a point back and front, and ascending steeply to a peak behind the head region. On either side, about $\frac{1}{3}$ in from the front, there is also a pointed projection. At first the skin is quite soft, and the abdomen makes gentle movements, especially if touched, but after a time it becomes quite stiff and passive. As the

skin hardens it adheres to the surface below it by the "tail."

The impression of three pairs of long, delicate legs and the nervures of folded wings can presently be seen on the sides and ventral surface of the body. One might be detached to see these, but the chrysalids should never be detached if you wish the butterflies to emerge. Ultimately, the skin of the pupa splits behind the head, and the full-fledged butterfly struggles out, but if the pupa is not firmly wedged it has great difficulty in pulling itself out and is likely to injure its wings in the process, so that it is unable to fly.

Breeding cages for moths and butterflies.—As the butterflies emerge, they should be transferred to a jam jar or breeding cage, where some of the food plant of the caterpillars has been placed. They should also be given a spray of flowers, brushed with a little honey and water or treacle and water for food, or the leaves may be brushed. Here eggs will readily be laid, and if both males and females are present they will be fertile, and any stages of the life history missed at the beginning can be filled in now. This would be about the beginning of the autumn term.

A useful breeding cage for any moths and butterflies can be made from a box 8 in. or 10 in. wide with the top and bottom replaced by either glass or net. (See illustration on the next page.) If glass is used, then a panel of perforated zinc should be let into one of the sides for ventilation. The glass should slide in and out, for handling and cleaning, and is turned upright to form the front and back. A little shelf should be fitted inside, about $2\frac{1}{2}$ in. from the bottom, with two holes bored in it to take the stems of plants. Under the shelf small dishes of water can be placed, and the stems passed through into them. This obviates any danger of the caterpillars falling into the water. If the box is enamelled white inside it is easily kept clean with a damp cloth. White paper can be placed on the shelf,



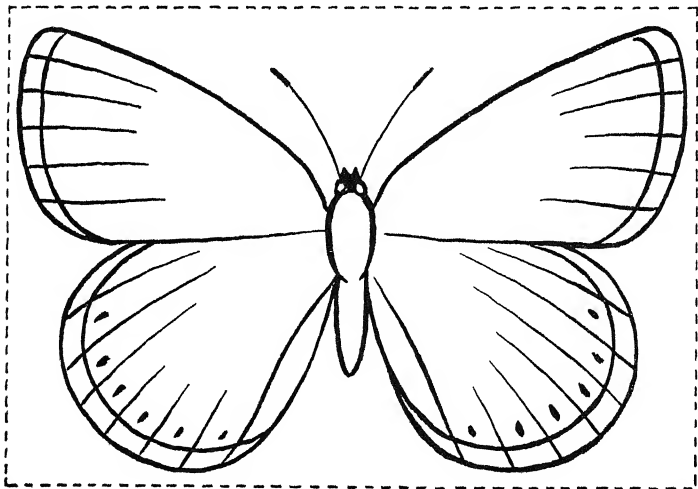
THREE TYPES OF BREEDING CAGES FOR MOTHS AND BUTTERFLIES
 "HOME" FOR SOIL CREATURES

perforated by the stems, and changed every day. The whole life history can be watched in such a "home." Another good breeding cage consists simply of a plant pot of damp soil with the food plant stuck into it, covered by a lamp chimney of the straight, wide kind, or a round lamp shade of clear glass, with the top covered by fine net, which may be pasted on. The lower rim is wedged in the soil.

The butterfly.—In addition to watching the development in the classroom, the children should hunt for the eggs and caterpillars themselves, notice what plants they frequent, and watch the butterflies. They should notice what flowers they visit, and if the children approach quietly, they can often see the coiled, springlike tongue or *proboscis*. It is really a fine tube made from a pair of grooved jaws fitting together.

It shoots down to the nectary of the flower. Notice how long the butterfly visits one flower, and the tendency to seek out flowers of the same kind, perhaps by recognising both colour and smell.

The children can notice the marking of the butterflies. They are cream colour, not quite white, with a black margin to the front edge of the front wing and two black spots in the female, and a smaller black margin on the back wing. When they rest on a flower it is possible to see the slender black body, six long slim black legs, and a furry head with a short projecting beak (really a sensory part of the jaws, called the palps). Notice that butterflies' wings meet over the back when at rest, showing the underside, which, in this case, is a cream colour or yellow shaded with a dusky greenish film, and on the fore wings are two black spots. As it rests on a flower,



TRACE-OUT OF ADONIS BLUE BUTTERFLY

the two long, slender black antennae can be seen quivering and occasionally touching the flower with the little black knobs at the apex

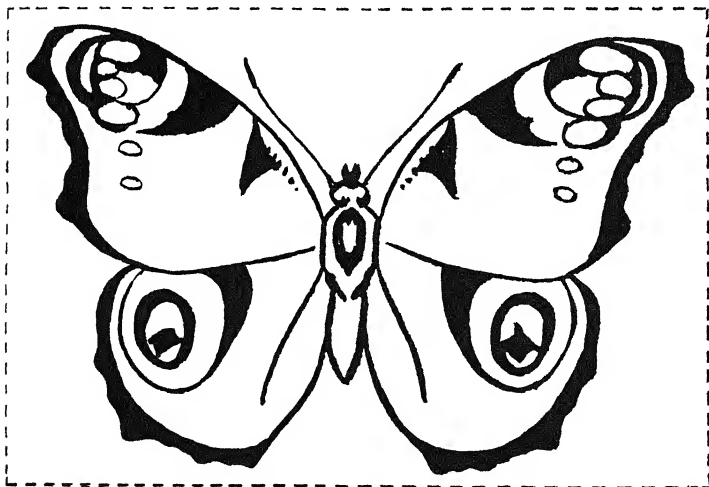
Notice the light, fluttering flight and the delicate and yet sure way in which they come to rest on a flower. These points can best be called to the children's attention at odd moments and in informal discussions in connection with entries on the butterfly chart.

THE COMMON TIGER MOTH

GENERALLY speaking, moths have broader, thicker bodies than butterflies, and the antennae are never clubbed (ending in a knob) but are either feathered or sawlike, tapering to a point. The wings are not closed over the back when at rest, but lie in the same plane as

the body, forming a triangle with it. The wings are often downy, covered with fine hairs instead of close-fitting scales as in the butterfly. Moths usually fly at night or in the dusk, though this does not apply to all, and frequently feed on very pale, evening-scented flowers with long closed tubes, such as Honeysuckle, Evening Primrose, and the Tobacco Plant, *Nicotiana*.

A caterpillar frequently found in May and June is that of the Common Tiger Moth, known as the "Woolly Bear," a striking and handsome creature two to three inches long, with long dark "fur" of rich red, brown and black. Often the hairs are nearly half an inch long. It hives and feeds amongst long grass, and low-growing plants such as dock and nettles, and is quite common in town gardens and neglected waste places in the suburbs. It is easy to keep in the classroom, if it is



TRACE-OUT OF PEACOCK BUTTERFLY

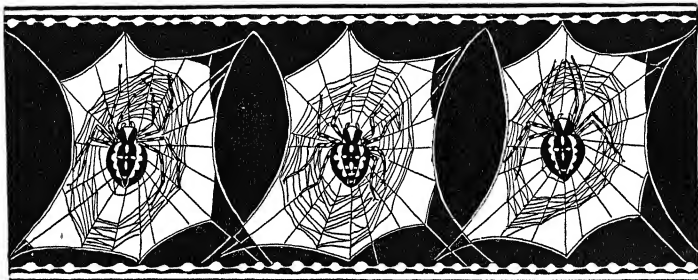
given fresh supplies of food. For some reason it seems chiefly to be found fully grown, perhaps because it is so well hidden in the tangle of weeds, and also because the eggs are laid late in the year and it hibernates as a young caterpillar.

Actually the body is black, with whitish tubercles bearing long black hairs tipped with white or buff. On the second and third segments these are reddish-brown. When it is ready to pupate it stiffens and

loses its hairs, then splits the larval skin, and inside is a black, glossy cocoon, usually found lying on the ground or under stones.

The Tiger Moth is one of our most handsome kinds. It has a red abdomen marked with black, dark velvety brown forewings; interlaced with cream or white spots and streaks, and orange red hindwings with dark spots. It is $2\frac{1}{2}$ in. to 3 in. across the wings, the female being the larger. The moths are stout-bodied and hairy.

GARDEN SPIDERS



Introduction.—In the warm, sunny autumn days the webs of the Geometric Spiders or Orb-Weavers are suspended on bushes, walls and window panes, wherever a slight current of air may blow flies against their sticky threads; and on misty or dewy mornings, or after rain, the spiral snares are beaded with glistening drops, so that they are attractive and conspicuous objects to study. There are so many webs that it is possible to turn a whole class out into playground or garden to watch the spiders, and try to find out how the web is used, and to follow the stages by which it is made. As the web takes an hour or more to construct completely, children who are interested will have to watch it in leisure time to see the whole process from beginning to end, but it is probable that some spiders will

be actively spinning, and that several stages can be seen.

The best known of the garden spiders is the Cross Spider which is marked on the back of the abdomen with streaks and dots of white arranged in the form of a cross.

Spinning and weaving are not correct descriptions of the making of a spider's web, since the thread which is emitted is not twisted, nor are the spiral threads passed under and over the spokes, but pressed upon each other in passing.

Observation.—Speak of the spiders' webs which we notice in the garden so much more in the autumn than earlier in the year, because the spiders are full grown and perhaps also the webs are more in the open. If we look for them, we can find smaller

spiders and their webs in the early summer. Tell the children that it is the female spiders which make the webs, but that we often find the males somewhere near. Ask what the webs are used for. Give the older children slips of questions to guide them, arrange them in groups of not more than four, and tell them that so soon as they go out into the playground each group should find a good-sized spider's web and watch it carefully. Read through the question slips with the children; then go out and start work.

Find a spider's web and determine the following points —

1. How is the web placed and attached?
2. What is its general plan?
3. How are flies caught in it and where? Is it all sticky?
4. Where is the spider? Does it stick to the web?
5. How does the spider know when the web is touched? What does it do?
6. Notice anything you can about the actions of the spider. Notice its form and colouring.
7. Look for fluffy yellow egg cocoons amongst leaves and in crevices.

The teacher would go from group to group, giving whatever directions seem necessary. If the children do not seem ingenious in finding the answers to the questions, suggest that they shall touch the spokes, the centre, and the spiral part of the web gently with a pencil, and throw very small bits of leaf or paper against it, to find out which parts are sticky and what the spider does. They may not notice, until it is pointed out to them, that if the spider is not on the web, a fine thread may be found running on the under side, from the centre, to a hiding place under a leaf or in some crevice. Here the spider will be found with one of her hind feet stretched out to grasp this signal thread, which informs her by the slightest vibration when any part of the web is touched.

Explanatory talks.—Take the questions in order. Let the children give the answers, the teacher amplifying or correcting so that the children can confirm them later.

1. The webs are generally found in rather open positions where a current of air reaches them, attached by a framework of silk thread at four or five points to leaves or other supports. The webs may be vertical or inclined slightly backwards at the upper edge, towards the more sheltered side. The spider strengthens the sides of the frame by walking along each thread two or three times and applying new threads close to the first. If a thread is needed in such a position that the spider cannot either walk along to fix it or drop with it, she will stand still and emit a thread which will blow about until it catches a spot that will serve the purpose, when she gives a little tug to tighten it, and runs along it drawing out another thread close beside it, and so strengthening the first. Each end of a thread is flattened out and fixed by pressure of the tip of the abdomen. In addition, the framework is strengthened by short stays at each point of attachment.

2. When the supports are made, the spider runs to the middle of one of the upper ones and drops on a thread to the other side, where she fixes it. She then returns to the middle of this crossline and fixes there a little blob, she continues to the end holding on to the line already made with her third and fourth feet, and holding with one of her hind feet the new thread issuing from her spinnerets slightly away from it. As she reaches the circumference she deftly separates the two threads with a quick outward movement of the foot which holds the new one and fixes it to the framework her span's length from the last. In this way the spokes are very evenly spaced. She returns down the new spoke to the centre, thus strengthening it. She may make several spokes on one side, then several on the other, probably in this way keeping the tension even. Where the spokes

cross at the centre there accumulates a small fluffy ball of thread, which the spider appears ultimately to eat.

Having made all the spokes, she returns to the centre, and then, working outwards, she makes a temporary spiral thread, its turns being close together at the centre, but making a wide mesh, perhaps $\frac{1}{2}$ in apart, as it extends farther out. This is quickly completed, taking perhaps five minutes, and then she probably rests, running down one of the spokes and remaining at the centre for a little while. She then returns to the outside edge, and, holding on to the temporary thread, makes the snare, the sticky spiral thread with a close mesh which extends from the margin to within an inch or two of the centre, leaving a non-sticky platform where she can rest. She bites away each section of the temporary spiral as she passes over it.

3. Flies are caught on the sticky spiral thread as they fly or are blown against it. If they flutter, several strands become drawn together and fix them all the more firmly.

4. The spider may be found on the under side of the platform, with all her legs spread out, grasping the spokes, and the side of the body against the web. In this position she would scarcely be able to see her victims, since her eyes are on top of her head. She will stay there for hours on sunny days.

She can walk on the spokes, and it is also possible that an oily substance covers her feet and prevents them from sticking.

If she cannot be seen on the web, look for the guiding thread already described and follow it to her lair under a leaf. The male spider, who can be recognised by his slim body and tiny black clubbed feelers, will probably be somewhere near the edge of the web, especially if the female is in the centre. He, too, often has a signal thread attached to the web, but it is to warn him of the movements of the female, whom he is waiting to mate.

5. As soon as the web is touched, it vibrates. If the spider is in the centre, she

at once runs to the spot from which the vibration began to find out why; if she is in her corner she feels the signal thread vibrate and runs on to the web. But if the movement is very slight she does not always come out at once. Small flies are often left until there is a number of them, when the spider goes round and bites and sucks them all. A large fly will be poisoned at once by a bite from her jaws, and may then be eaten, or left till she is hungry. Though the spider will respond if a bit of paper is thrown on to the web, or it is touched with a brush or a pencil, she does not usually come very far. It may be that the lack of any smell tells her that there is nothing to eat. Sometimes the spider will be seen to cut away part of the threads which have caught a large fly, so that it hangs down, then she sets it spinning with her foot, and covers it with threads until it is completely swathed, when she will bite it and feed upon it. These hanging flies will often be seen, though it is only occasionally one is lucky enough to see the process.

6. Let the children describe the colour and markings, and the chief points of structure which they can see. The spider's body consists of two main parts. To the under side of the front part (the head-thorax) four pairs of legs are attached. Each has seven joints, but the smaller ones close to the body are difficult to see, while the white spots give the appearance of many smaller joints. The third and fourth pairs of legs end in small claws which are capable of clinging to the thread and bearing the spider's whole weight. A pair of biting and sucking jaws project downwards from the head, flanked by a pair of short feelers. The spinnerets which make the various threads used for the web and cocoon are on the tip of the hinder part of the body or abdomen. The connection between the thorax and the abdomen is so fine that no solid food could pass, so the spider must live on juices only.

7. In October, a number of eggs are laid, of a light pink colour, wrapped in a warm,

loosely woven cocoon of yellow silk, about $\frac{1}{2}$ in. to $\frac{3}{4}$ in across, through which they are just visible. These are hidden amongst dead leaves, on evergreen bushes, or in crevices of doors and window ledges, where they usually remain until the warm spring days. Then the young spiders hatch out, and spinning their first threads, descend from the cocoons. They cannot feed until they have shed their first skins, and they disperse only after this has taken place. Their first adventurous journey has often been described. They will stand on the edge of an exposed bush, or the rim of a jam jar where they have been kept for the winter, and, arching the body and standing on tiptoe in the breeze, will send out streamers of thread which catch the wind and, like thistledown, blow away with the young spiders attached. Presently the little spiders settle down, spin minute but perfect webs according to the ancestral pattern which they have never seen, and catch small flies. As they feed and grow, they shed their skins, appearing a little larger after each cast, until by the end of the summer they are full grown. Though the majority die, some mature spiders survive the winter and may live two or three years.

Further observations.—Give the children further opportunities of watching spiders at work, especially of trying to see how they deal with their victims, and how both the temporary and permanent spirals are made.

Search for cocoons, and keep them for the winter in jam jars covered with gauze, so that the hatching and dispersal of the young spiders may be watched in the spring. It is often possible to persuade a spider to lay her eggs in a jam jar if she is caught about the end of September and supplied daily for a few days with one or two bluebottles or other large flies.

Making a spider's home.—It is usually possible to get a spider to spin a web in captivity if a shallow box about 18 in square is set up on its side, covered with

a sheet of perforated zinc instead of the bottom, and fitted with a sliding glass lid. A little jar of leafy twigs should be placed inside, arranged so that the twigs spread widely but not thickly enough to obscure the view. Introduce the spider, and place the box in a slight draught from a window, with the zinc side towards the window. Raise the glass lid very slightly (it can be supported on a match stick) so that there is a through draught, but the spider cannot escape. Within a day she will generally spin a perfect web, which it is often possible to watch from beginning to end. The draught of air is apparently very important, the spider will not spin if the air is still.

Make an island by inverting a small jar in a bowl of water and place a spider upon it. Notice what happens (a) in still air, (b) in a draught. In still air the spider usually makes no attempt to escape. In a current of air she behaves just as she did when a baby, that is, she throws out fine silken threads which catch in the wind. But she is far too heavy to be borne away on the thread. She must wait until one catches a distant wall, or the edge of the bowl of water, just as when she makes the framework of her web. As soon as a thread catches, the spider becomes aware of it, and giving a little tug to test its firmness, slips out upon it and crosses to safety.

Kate Harvey.

A TALK ON HIVE BEES

WHAT a strange and hard life it would be if we lived and worked for ourselves only! Each one of us would need to grow his own wheat, grind his flour and bake his bread, catch and kill his own meat, make his bricks and build his house, shear his sheep and weave stuff for his clothes. Thousands of years ago the first men to live on the earth had each one to find food and shelter for himself in this way. Now men and women have learned to share out between them the work to be

done—some men fish, some keep cattle or grow wheat to give us food, some build, some teach, and others drive trains and motors

Men are not the only creatures who have learned in this way to live happily together. Hive bees live in companies and share out most cleverly the work for the common good. A company of bees is called a swarm, which is led by a queen. The Queen Bee is specially large and specially cared for by all the other bees. From her babyhood she is fed with special food, she is always attended by a number of handmaidens who stroke her and feed her and never turn their backs upon her.

The Drones, or Princes, are the next largest bees. They do not work, but live only to become the mates of Queen Bees from other hives. At the end of the summer the lazy Drones are turned out of the hive to die, or are walled up in wax and starved to death. The Drones eat the food brought by the Workers. The Workers are the smallest bees in the hive, but they are the busiest. They fly from flower to flower gathering honey and pollen. The honey they suck up, and the pollen sticks to the hairs on their bodies. With their legs they scrape off the pollen and push it into grooves on the inner side of each back leg. When they are full of honey and loaded with pollen they return to the hive. You will notice if you watch carefully that bees do not fly from one kind of a flower to another, they will go from primrose to primrose, but not from a primrose to a violet. In this way they help the gardener, for flowers make better fruits and seeds if they are given some pollen from another flower of the same kind.

But to gather honey and pollen is not the cleverest thing that the Workers can do. Early in the summer a Queen Bee sets out, followed closely by a large company of other bees. When the Queen settles the other bees settle round her, and it is when the bees have settled in a heap in this way that the bee keeper gathers the swarm

into his hive. Before they start out with their Queen the bees gorge themselves with honey to last them on their journey so that they are too full of food to be ready to sting.

When the bees find themselves in a new hive a large number of Workers crawl to the top of the hive and hang there by their forefeet for nearly a day and a night. During this time a wonderful change takes place in their bodies. The honey they have eaten changes to wax, which comes out in flakes on the under side of their bodies. While most of the Workers are hanging upside-down, the others run over the walls of the hive and carry away every speck of dirt or rubbish.

At last one of the Workers who has been hanging climbs over the others and clears a little space for herself in the middle of the roof of the hive. She collects with her feet the wax which has come out on her body, moistens it with her tongue and kneads it with her pincers until it is soft and sticky. Then she places the little lump of wax on the roof. Other bees follow and place their own lumps of wax upon it. When enough wax is collected, other bees come forward and hollow it out to make several little six-sided caves, or cells, which are to be the cradles of the young bees. The wax cells are built to form walls about half an inch apart, and these wax walls are called combs. Modern bee keepers help the bees by putting wax walls in the hive, on which the bees may build their cells without needing so much wax, so that they may have more time to spend in gathering honey.

Then the Worker bees go out to gather honey and pollen. When they come back to the hive the younger Workers take the pollen from them, moisten it with their tongues and make it into bee bread. The Workers then go to the cells and fill them with the honey they have brought from the flowers.

While the cells are being made the Queen is restless. When the comb is ready she goes to it, always attended by her hand-

maidens, and lays one egg in each cell. The egg is a little bluish white thing, which in four days hatches into a grub. The grub feeds on the honey it finds in the cell and grows till its head peeps out. The younger Workers, or Nurses, fondly feed it for the next five or six days, and then cover the top of the cell with wax. The grub inside spins itself a robe of silk, called a cocoon. Within the cocoon the grub changes into a young bee who soon eats its way out of its cell and is ready to take its place in the hive.

As well as Builders and Nurses, there are the Engineers who keep the hive cool by fanning it with their wings, so that the wax shall not melt and bend in the hot sun. Some bees are Watchmen who guard the door and kill any strangers or enemies who try to come in. A bee can sting only

once, for in stinging part of its body is torn away and it dies. When a creature like a snail enters the hive, it cannot be stung to death, so the bees make it a prisoner by covering it with wax.

The Queen lays thousands of eggs all through the summer. Most of the eggs turn to Workers, some to Drones, and a few are the Princesses who are specially fed and turn to Queens. When a young Queen crawls out of her cell the old Queen will probably take a company of bees with her and fly away to another hive, for the bees will not allow more than one Queen to a swarm. The old Queen will often kill the Princesses with her sting before they come out of the cells. When two Queens meet they will fight together till one is killed.

Kate Lay.

STORIES TO READ OR TELL

GOSSAMER SPIDERS

MARY'S bedroom had one window looking on to the stackyard, so very early next morning she was wakened by shouts outside. She jumped up and looked out. There was Paul opening the gate into the field beyond, and shouting to Laura as he let her out. Laura took no notice. She walked sedately to the far end of the pasture, where she began to eat the sweet, short grass. Mary called out, "Where are you going, Paul?"

"To let the pigs and chickens out into the cornfield," said Paul.

"Into the cornfield to eat the corn!" said Mary, shocked.

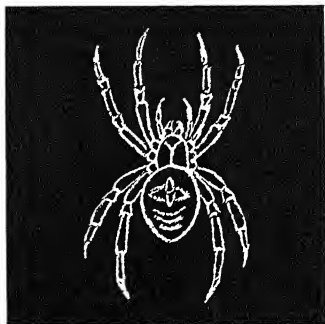
"Silly, the corn's all in. They just eat what has fallen," answered Paul.

"Oh, do wait for me," said Mary.

But Paul ran off up the field.

Mary dressed as quickly as she could, and went across the meadow to the corn-

field at the other side. Two pigs and a host of chickens were busy feeding in the stubble. With Paul was Jock, his wire-haired terrier, with his head in a rabbit-



GARDEN SPIDER

hole. Mary went up to them, and Paul turned round

"Come on, it's breakfast time I'll race you home," he said. They ran back across the field. The sun was shining and the grass was covered with dew. Fine bright threads stretched across it and made a silvery web over the whole field.

"What makes all these threads?" asked Mary.

"Little spiders that live on the ground," answered Paul. "It's called gossamer. You don't notice it unless the dew is on it."

"It looks as if the fairies had been dancing all over the grass," said Mary.

"Fairies don't spin webs," said Paul. "Spiders and caterpillars are the only things that I know of."

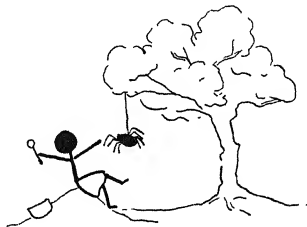
After breakfast Paul went off to school, and Aunt Molly was busy, so Mary wandered off by herself. She explored the garden, which was full of bright-coloured flowers, she smelt the late roses and squeezed the throats of the snapdragons to see them open their mouths wide and she found some violas shooting their seeds away. The seeds lay in three little boat-shaped hollows, joined to the stalk, and as the sun dried them they closed at the edges and pushed the seeds out with a jerk. Some of them fell about a yard away.

Then Mary went to the cornfield again. She hunted for the little spiders that made the gossamer threads. She soon grew tired, and sat down by the hedge.

Then she noticed that something very curious was happening on the twigs of hawthorn. The ends were covered with tiny spiders, no bigger than pin heads. They were stretching up on their little legs with their feet close together and their bodies pointing upwards, and from the tip of their bodies they were throwing out numbers of fine white threads, like tufts of thistle-down, only very, very small. Presently, their threads were caught by the breeze, and first one and then another of the baby spiders went sailing away in the air, high over the hedge and over the

field. Mary was delighted. She watched a great many of them float away and wondered if they would ever come back or if they had found a new home in another field.

Looking in the grass she found a tiny, fluffy, grey ball, about a quarter of an inch across, and while she held it, it shook itself out and she saw that it was made up of baby spiders, all spinning little threads and hurrying away.



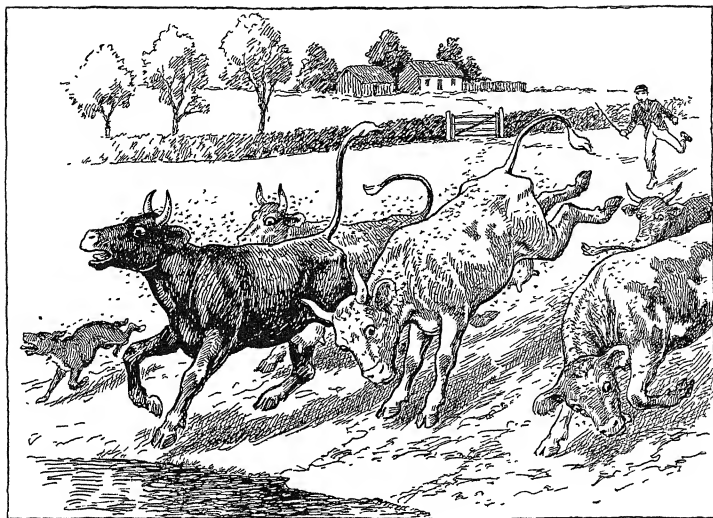
Little Miss Muffet

She put the little ball on a twig and watched for a long time, and some of the babies scrambled to the end and they, too, were waited away.

Kate Harvey

THE WASPS' NEST AND THE COWS

AT the edge of the wood and by the river lies a meadow, where, among the grass and the flowers, a mole had thrown up a big heap of earth and then wandered on. In the empty molehill some wasps built a trim little nest for their young. These young wasps were poor helpless grubs, naked and soft, who can neither creep nor fly, nor endure any cold or wet, but the old wasps, who are their elder sisters, love the little ones tenderly, and take the greatest care of them. They build



for each little sister or brother a special chamber, or cell, and round all these little cells a thick covering through which neither rain nor wind can get. Early in the morning the old wasps fly out in search of food, which they stuff into the mouth of each of their young charges to make them grow big and fat, and they look forward to the time when the little grubs will turn into chrysalids and presently come out as smart young wasps.

But one day there came into the meadow a cowherd, with his red, black, white, and dappled cows. He sat down upon a stone by the wayside and his dog lay down beside him, eyeing his master's dinner bag and wondering whether there would be any to spare for him. Meanwhile the cows wandered to and fro in the meadow, plucking at the grass and flowers and munching them. A cow only thinks of eating, fills her mouth

and does not trouble her head about anything else. She pays no heed as to where she steps or whether she happens to trample upon a beetle or a snail, a young frog, or even a bird's nest with eggs or young birds.

So when a big, black cow came to the molehill she never thought about the wasps that had built their beautiful nest with young ones in it. Flopp! She put her great foot right into the midst of it, crushing more than a hundred dainty little cells, and killing, at the same moment, as many poor little grubs inside them.

But this time she was to pay for her clumsiness! The old wasps were furious at such cruel destruction, vowed vengeance for the death of their poor little sisters, and determined to save those that were left. Ten or twenty of them charged furiously at the fat old cow, and stung her with their venomous stings through her thick coat,

so that she lowed aloud in her pain, swished her tail to rid herself of her tormentors, and finally galloped away as if she were mad. But the wasps followed her to renew the attack, and in her terror she plunged into the river to escape them.

But more and more wasps came buzzing up, hundreds upon hundreds of them. They had flown out to seek food for the little sisters, and had discovered the mischief on their return. They were as angry as the others had been, and, having routed one enemy, they looked out for more of the same sort, and fell upon the other cows till they likewise fled before their stings.

At first the cowherd could not think what had come to his cows, and sent the dog to drive them back into the meadow. But the wasps attacked the dog, who yelped miserably, tucked his tail between his legs, and jumped headlong after the cows into the water.

The cowherd made up his mind, at last, to come to the rescue, but hardly had the wasps set eyes upon him than they flew at the newcomer. He knew well how a wasp sting hurts, so he took to his heels and drove his cows away as quickly as he could to another grazing ground where there was no wasps' nest.

Richard Wagner



WASP

THE STORY OF ARACHNE

(*Arachne*, a word derived from the Greek,—*spider*)

LONG ago, in a Greek city far away over the sea there lived a maiden called Arachne. In those days women spun wool into threads and wove the threads into cloth. Every day Arachne sat at the door of her cottage weaving cloth. Of all the maidens in the city none could weave so well as she. Into her cloth Arachne wove beautiful pictures of flowers, trees and fruit, of men and women, of heroes and gods. Arachne's work was so beautiful that the city-folk crowded round to see it, and spoke loud praises of the lovely work.

Arachne listened eagerly to the praises of the people, and she began to think that no one in the world could weave so well as she did. One day, when a crowd of people were watching her, Arachne cried out boastfully, "There is no weaver in the world to equal me. Even the goddess Athena herself could do no better work than mine."

The people trembled with fear when they heard Arachne's words, for they knew that their goddess Athena could hear, and they were afraid that she might be angry. "Speak not so rashly, child," said a grey-haired woman to Arachne. "If Athena were to appear at this moment you would indeed be sorry for your foolish boast."

"Let her come," cried proud Arachne, "and we will see which of us is the better weaver."

"She is here," replied the old woman, who instantly changed into the tall, handsome goddess, with shining raiment. A frown was on her forehead as she said to those who stood near, "Bring two looms, and we will see who is the finest weaver in the land."

Quickly two looms were brought and set up side by side. Arachne and Athena set to work. Not a sound was heard except the click of the needles as they flashed in

and out. Slowly beautiful pictures began to appear, and the people pressed close to see the cloth grow. At last the work was done. Arachne had never before woven such a beautiful piece of cloth. The pictures in it showed stories of gods and goddesses surrounded by borders of leaves. But when the people looked at Athena's cloth they saw that it was far more wonderful, for the gods and goddesses on her picture looked alive, the foam of the sea was so real that women shrank back for fear of being wetted, and the faces of the gods were so stern that the children ran shrieking from them in fear.

Very angrily Athena turned on the boastful Arachne and tore her cloth from top to bottom. Arachne was now so ashamed of herself that she crept away into the woods to die. But Athena would not let her die. "Vain child!" she cried, "you shall not die, you shall live! You shall weave for ever and ever." At once Arachne was changed into a spider hanging from a silken thread.

Speech training.—To give the children practice in speaking and to help them to appreciate the story ask such questions as the following —1 What does the beginning of the story tell us? 2 Why did people go to see Arachne at work? 3 Why did Arachne become proud? 4 What does the middle of the story tell us? 5 Why was Athena angry with Arachne? 6 How did Athena hear the boastful words spoken by Arachne? 7 Why was Athena's work better than Arachne's? 8 What does the end of the story tell us?

Choose the right word.—Write the following words on the blackboard and the sentences on cards. Let the children rewrite the sentences inserting the correct words —

who, where, what, why, when.

1. — did Arachne sit to do her weaving?
2. — did Arachne boast?
3. — was angry with Arachne?
4. — happened to Arachne?
5. — was Arachne ashamed?

A STORY FROM HISTORY

BRUCE AND THE SPIDER

Historical note.—After the execution of William Wallace, the Scots found a new leader in Robert Bruce. He had a powerful rival in John Comyn, the Red Comyn, as he was called. Comyn and Bruce met at Grey Friars Church, Dumfries, to talk matters over. During the hot discussion Comyn called Bruce a traitor to Edward. Bruce in anger drove his dagger into Comyn. "I doubt," cried Bruce, as he rushed from the church, "I have slain the Red Comyn." "I mill mak sicker" (make sure), answered Kirkpatrick, one of his followers, and going in, he completed the murder. Bruce hurried to Scone and was crowned king of Scotland, but it was years before he was king in

anything but name. "Henceforth," he had said to his wife at their coronation, "thou art queen of Scotland, and I king." "I fear," replied Mary Bruce, "we are only playing at royalty, like children at their games."

Bruce had few friends and many enemies. Edward looked on him as a murderer and a traitor, the friends of Comyn sought revenge. Bruce's followers were defeated, and he had to fly for safety to the moors, but before the end of the year he returned and inflicted heavy losses on the English garrison at Carrick, where his own estates lay. Early in July, 1307, Edward I. marched from Cumberland, where he had been resting, to meet Bruce. But the king was now old and weary, he died at Burgh-on-Sands, a few miles from the Scottish border.

Edward II was quite unlike his father, for he was lazy and careless, thinking that a king should have nothing to do but amuse himself. He did not trouble about the Scottish war, and returned to London. Robert Bruce soon began to gain ground. He took castle after castle, and in 1313 only the fortress of Stirling remained in English hands. This was the most important castle, it was the key of Scotland, for it guarded the roads, from the Highlands to the Lowlands. Even the King was stirred to try to hold this fortress, and he gathered together one of the greatest armies an English king had ever led to battle. The Scottish force was less than half its size.

On June 24, 1314, the English reached Bannockburn, within sight of Stirling. Bruce had made the circle of his spearmen more secure by digging pits in front of his line and covering them with turf. Edward was no soldier. He sent his archers forward to shoot a gap in the ranks of the spearmen as his father had done at Falkirk, but he left them unprotected by cavalry. Bruce seized the opportunity, and his own cavalry rode down the archers. The leading horses of Edward's knights plunged into the pits as they rode against the spearmen. Soon Edward's army was in confusion, and before it could recover, a body of camp followers appeared on a hill overlooking the battlefield. The English thought that it was another Scottish army; they broke and fled. Edward, with a band of knights, galloped to Dunbar, and escaped by sea to England. The victory of Bannockburn gave Scotland her independence, vast wealth from plunder and ransom, and a fierce pride which helped her people in many a difficult time. All Scotland except Berwick fell into the hands of Bruce. In 1318 this town, too, was captured, and the Scots marched far into England, burning and pillaging as they went.

From that day till his death "good king Robert," as the Scots called him, ruled his country wisely and well, and kept it free from the power of England; and so it remained for many years.

The children's story.—Robert Bruce, king of Scotland, was hiding one day in a little hut that lay deep in the forest. He was all alone, and much discouraged. He had been fighting many battles with the enemies of Scotland, and had lost every battle. His soldiers had been killed or else driven to take refuge in the mountains, as the king himself was now doing. He was hungry and homeless, but he had no food and no place of shelter except a mean hut.

"There is no use in trying to free Scotland now," thought the king. "Our enemies are too strong. I might as well give up the struggle."

Just then he saw a spider that was trying to spin a web between two rafters. She would fasten one end of her thread to a rafter, and then swing herself across to the other rafter. She seemed to find this very hard, for each time the thread broke, and the spider would have to begin all over again.

Bruce sat watching her, and wondered how long she would keep trying before she gave up. Six times the spider tried to fasten her thread, and six times she failed.

"You are a brave and patient spider," thought the king. "You do not give up as soon as I do. I will watch you try the seventh time, and, if you succeed, I too will risk my seventh battle."

Once more the spider swung her tiny thread to the opposite rafter, and this time it held fast.

"You have taught me a lesson, little spider," said Bruce. "I will gather my army and try once more to drive away the enemies of Scotland."

So the king stood again at the head of his army, and fought as he had never fought before. This time he won the battle, and made his country free.

Speech training.—To give the children practice in speaking and to help them to appreciate the story ask such questions as the following—1. What does the beginning of the story tell us? 2. Why was King

Robert Bruce hiding? 3 What does the middle of the story tell us? 4 Why did the king call the spider *patient*? 5 How many times did the spider try to fasten her thread? 6 What lesson did the spider teach the king? 7. What does the end of the story tell us?

Do you know?—Ask such questions as the following to ensure that the children understand certain words and expressions relating to the story—1. What are the people of Scotland called? (Scots or Scottish) 2 What are the people of England called? 3 What is a *mean* hut? 4 Where are the rafters in a hut? 5 What does this rhyme mean?—

“If at first you don’t succeed,
Try, try, try again”

Choose the right word.—Write the following words on the blackboard or on cards and let the children select the correct doing-words and write the sentences:—

- 1 Spiders (laugh, jump, spin).
- 2 Fishes (run, walk, swim)
- 3 Boys (shout, fly, run) kites.
- 4 A train (leaps, runs, jumps) through a tunnel
5. The sun (shines, walks, sails) in the sky
- 6 On the sea ships (sail, hop, gallop).
- 7 The horse (shouts, gallops, creeps) along the road.

Writing.—Let the children finish these numbers up to *tenth*—first, second, third . . . tenth

RHYMES AND POEMS

FIDDLE-DE-DEE

Fiddle-de-dee, fiddle-de-dee,
The fly has married the humble-bee,
They went to church, and married was she,
The fly has married the humble-bee
Old Rhyme.

THERE WAS AN OLD MAN IN A TREE

There was an old man in a tree,
Who was horribly bored by a bee,
When they said, “Does it buzz?”
He replied, “Yes, it does!
It’s a regular brute of a bee!”
Old Rhyme.

A SWARM OF BEES

A swarm of bees in May
Is worth a load of hay;

A swarm of bees in June
Is worth a silver spoon,
A swarm of bees in July
Is not worth a fly.
Old Rhyme.

BEES

If bees stay at home,
Rain will soon come

If they fly away,
Fine will be the day
Old Rhyme.

Note.—In connection with this rhyme about the weather the children can repeat the following:—

A red sky at night,
Is the shepherd’s delight.

A red sky at morning,
Is the shepherd’s warning.

THE BEE AND THE FLOWER

The bee buzz'd up in the heat,
 "I am faint for your honey, my sweet."
 The flower said, "Take it, my dear,
 For now is the spring of the year
 So come, come!"
 "Hum!"

And the bee buzz'd down from the heat.

And the bee buzz'd up in the cold
 When the flower was wither'd and old,
 "Have you still any honey, my dear?"
 She said, "It's the fall of the year,
 But come, come!"
 "Hum!"

And the bee buzz'd off in the cold
 Lord Tennyson.

Articulation—This tiny song is full of the humming of the bee. Notice how the words have been selected to imitate the natural sounds—

"So come, come!"
 "Hum!"

And the bee buzz'd down from the heat "

Let the children slowly practise "Hum", dwelling on the last letter to imitate the sound of the bee

1. Which lines in the poem sound like the humming of the bee? 2 What does the bee say to the flower in the first verse? 3 What does she answer? 4 What was the flower like when the weather turned cold? 5 What does the bee say in the second verse? 6 What does the flower answer? 7. Why did the bee buzz off in the cold at the end? 8. Where does the bee live during the winter?

HEIGH HO!

There was a little rose in a garden bed,
 She had a green frock and a pretty pink head.
 Heigh ho!
 Let the winds blow.

There came a little bee, and he said "Fair lady,
 You live in a garden sweet and shady."
 Heigh ho!
 Let the winds blow.

"Fair sir," said the rose, "you bring warm weather,
 Pray let us sing a gay song together."
 Heigh ho!
 Let the winds blow

There came a little bird, and he said "I'll stay
 And sing a right merry song, if I may"
 Heigh ho!
 Let the winds blow

There came a little girl, and she danced and said
 "I love my rose with the pretty pink head"
 Heigh ho!
 Let the winds blow.

She danced and sang in the garden shady,
 Good-bye, bird and bee, good-bye, rose-lady
 Heigh ho!
 Let the winds blow.

M Ashworth.

Note—This is another poem suitable for community work. A bright child, capable of learning all the poem, should recite the first two lines of each stanza, all the class can join in repeating

"Heigh ho!
 Let the wind blow."

If this poem is taken with the Sevens it will afford them good practice, when the poem is learned, to select from it all the principal descriptive words: e.g., *little, green, pretty, pink, fair, sweet, shady, warm, gay, merry*

THE BUTTERFLY

A butterfly perched on a mossy brown stile,
And a little maid saw him and cried with
a smile

"O beautiful butterfly, yellow and blue,
Stop, stop, let me sit on the stile with you!"
But the beautiful butterfly, yellow and blue,
Opened his wings and away he flew,
And when he'll return I really can't say,
But the little maid sits on the stile to this
day!

Old Rhyme.

Drawing—Let the children draw their
own impressions of the scene in this rhyme.
First let them tell all the colour words
• 11 the poem—*brown, yellow, blue* Explain
the meaning of *mossy*, or, better still, show
some moss to the children. With paper
butterflies, such as those described on page
1144, let the children observe how a butterfly
perches, and how it *flies*

The children will then be prepared to
draw their picture of the maid talking to
the butterfly

MR. SPIDERSPINNER

(This poem is set to music on page 1170)

"Good morning, sir, how do you do,
Old Mr Spiderspinner?
O tell me, please, and tell me true
What you like best for dinner "

"Daddylonglegs when you please,
Bluebottle roast on Sunday,
Bluebottle cold, with greens and peas,
And midge-pie hot on Monday"
Professor D'Arcy Wentworth Thompson

Note.—This charming little poem can be
recited by two boys; one recites the first

verse and the other the second. The first
boy wears a hat with which he salutes Mr.
Spiderspinner Let several children in turn
say the first verse in order to see who can
recite it in the most natural manner. While
this is being done the remainder of the class
listen critically Let the children vary the
recital by emphasising different words;
e.g.,—

- 1 *How* do you do
- 2 How *do* you do
- 3 How do you *do*

- 1 O *tell* me, please, and tell me true
- 2 O tell me, *please*, and tell me true.
- 3 O tell me, please, and tell me *true*

TO THE QUEEN OF THE BEES

Bee! tell me, whence do you come?
Ten fields away, twenty perhaps,
Have heard your hum

If you are from the north, you may
Have passed my mother's roof of straw
Upon your way.

If you came from the south, you should
Have seen a little cottage just
Inside a wood

And should you go back that way, please
Carry a message to the house
Among the trees.

Say—I shall meet her at the rock
Beside the stream, this very night
At eight o'clock

And ask your queen, when you get home,
To send my queen the present of
A honeycomb.

James Stephens.

SONGS

MR SPIDERSPINNER

WENTWORTH THOMPSON

PERCY G. SAUNDERS

Doh = C

Good

morn - ing, Sir; how do you do, Old Mis - ter Spi - der -

spin - ner? O tell me please, and tell me true What

1 .d' :t .se | l :l . | :
 you like best for din - ner?"

d' .s :s .s | l .l :s s }
 "Dad - dy - long - legs when you please; Blue -

1 .d' :t .r' | d' :d' .d' | f' .m' :r' .d' }
 -bot - tle roast on Sun - day; Blue - bot - tle cold, with

r' .d' :t .l | s .d' :t .r' | d' :d ||
 greens and peas, And midge - pie hot on Mon - day!"

LITTLE MISS MUFFET

NURSERY RHYME

Arranged by
PERCY G SAUNDERS

Doh=D || : : | : : | : : | d : m : s | s : m : s | }

Lit - tle Miss Muf - fet

|| 1 : d' : l | s : m : | d : m : s | s : m : s | 1 : - : d' : - : d | }

sat on a tuf - fet, Eat - ing her curds and whey — There

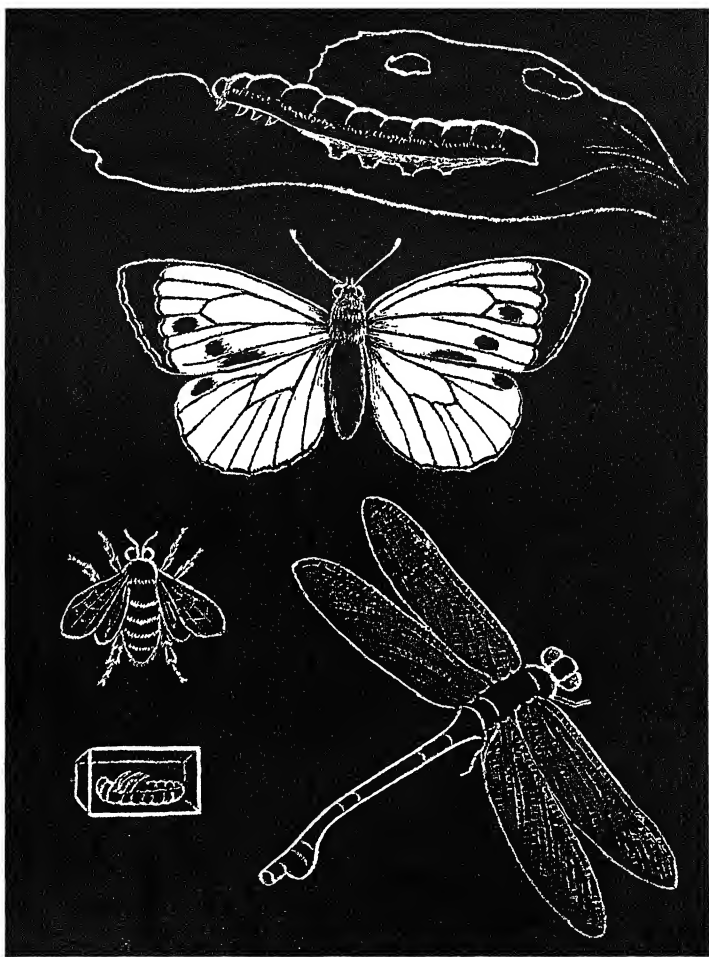
|| d : m : s | s : m : s | 1 : d' : l | s : m : d | }

came a great spi - der and sat down be - side her, And

|| d : m : s | s : m : s | 1 : - : d' : - : || }

fright ened Miss Muf - fet a - way —

The musical score is written for voice and piano. It features a key signature of one sharp (F#) and a time signature of 8/8. The melody is simple and repetitive, with lyrics written below the notes. The piano accompaniment consists of chords and single notes in the right and left hands. The score is divided into four systems, each with a vocal line and a piano accompaniment. The lyrics are: 'Lit - tle Miss Muf - fet sat on a tuf - fet, Eat - ing her curds and whey — There came a great spi - der and sat down be - side her, And fright ened Miss Muf - fet a - way —'. The score ends with a double bar line.



CATERPILLAR

BUTTERFLY

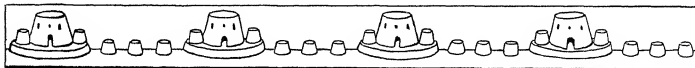
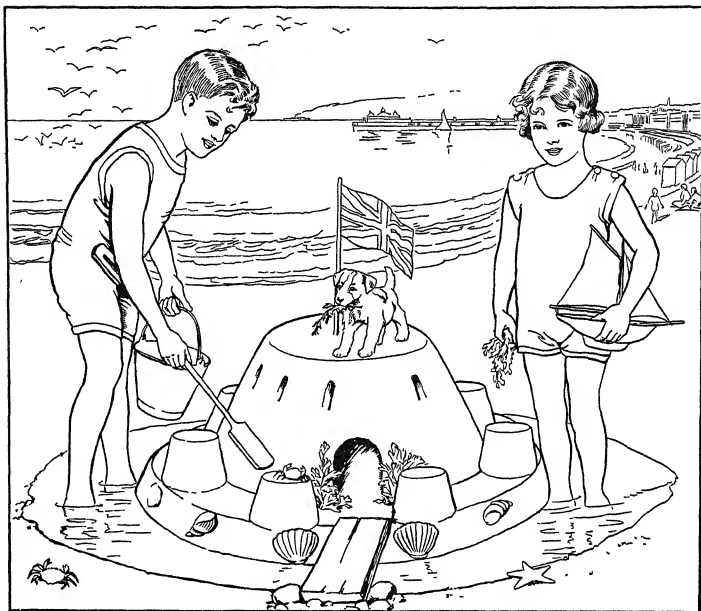
BEE

BEE IN CELL

DRAGON FLY

CENTRE OF INTEREST—THE SEASIDE

XXXI. ON THE SANDS



BUILDING A SAND CASTLE
Drawing in Outline of Picture No 37 in the Portfolio

Description of Picture No. 37.—Peggy and John have built a fine sand castle surrounded by a moat. The castle consists of a central tower, with loophole windows and a doorway ornamented with seaweed. A Union Jack waves from the top, and on the flat top, too, stands a puppy with a piece of seaweed in its mouth. Around the central tower is a neat row of sand "pies" and the inner wall of the moat is decorated with shells of various kinds. A piece of driftwood makes the bridge across the moat.

The two children, dressed in bathing costumes, are paddling in the moat. The girl has a toy yacht in one hand and some

seaweed in the other. The boy holds the spade and pail with which he has been making the "pies." He has just deposited a baby crab on one of the "pies" with his spade. A larger crab and a starfish, evidently collected by the children, lie near the castle on the sand.

Farther away, on the sands, a row of bathing huts can be seen, and other children are playing near them. There is a distant glimpse of the buildings on the promenade with the town behind. A long pier, with a pavilion at the end, runs out into the sea. On the sea a steamer and a sailing vessel can be seen. Flocks of sea gulls are circling over the water.

LANGUAGE AND SPEECH TRAINING

Conversation on Picture No. 37.—1 Tell what place is shown in the picture. 2 Tell what colour the sea is. 3 Tell what colour the sand is. 4 Tell how the boy and girl are dressed. 5 Give the girl a name, e.g., *Peggy*. 6 Give the boy a name, e.g., *John*. 7 Tell who has made the sand castle. 8 Name the flag on the top of the castle. 9 Tell what the puppy is doing. 10 Name the thing the puppy has in its mouth. 11 Tell how the boy made the sand "pies." 12 Tell what the girl is holding. 13 What do we call the ditch of water round a castle? 14 What is put for a bridge across this moat? 15 What things have the children put on the castle to make it more beautiful? 16 What live creatures can you see on the sand? 17 What are the huts you can see behind *Peggy*? 18 Name the building which runs out into the sea beyond the huts. 19 Tell what ships you can see. 20 Name the birds flying over the water. 21 Tell what you see in the border under the picture.

Number.—The Fives can make sand castles and pies in clay or plasticine. These

can then be utilised in various number exercises both in addition and subtraction. The children can count the number of castles and pies seen in the picture. How many more pies are needed to make ten in the middle picture? How many groups of ten pies are there in the border? How many more castles are needed in the border to make six? to make eight? to make ten?

Reading and drawing.—Write on cards directions for drawing, and distribute the cards among the children —

- 1 Draw a sand castle
Put a flag on the top
Draw a sand pie on one side.
Draw a sand pie on the other side.
- 2 Draw a blue sea
Put a steamer on the sea.
Put a sailing boat on the sea.
Put some sea gulls flying over.

Articulation.—Such sentences as the following afford useful practice in articulation —

1. Charlie kept a cage of crawling crabs
2. Shy Susie saw seven ships sailing on the sea.
- * 3. Six fish lay on a dish

SOME COMMON FORMS OF LIFE ON THE SEASHORE

The Starfish.—This familiar five-rayed creature is not a fish at all, and is better called by the name of *Sea Star*. It cannot swim, nor has it fins or tail. It creeps along the sea floor by the action of hundreds of little suckers on its underside. The starfish takes in water through a circular opening on its upper surface, which connects with a network of canals branching over its whole body. It can so regulate the flow of water out through its suckers, that it can attach a portion of itself to the ground by suction and then draw the rest of the body along. The upper surface is protected by sharp spines and tiny claws, which pick off small creatures and seaweed that might settle on the body of the starfish. Its mouth is in the centre of the lower surface. When it comes upon a tiny crab the starfish will curl its five arms under, and swallow the victim whole. It acts as a seaside scavenger, for it eats much of the dead and decaying substances which are washed up close to the shore.

Unfortunately, the starfish also attacks and eats certain shellfish, particularly it does great damage to oyster beds. It cannot swallow a whole oyster, shell and all, but it fastens itself to the oyster, with two rays on one half-shell, and two on the other, and the fifth on any supporting object. The starfish then sets to work to pull the oyster shell open. The oyster can resist a strong pull, but not a long pull, and the starfish remains steadily pulling, till at last the oyster muscle relaxes and the shell opens. Then the starfish turns out its stomach bag through its mouth and digests the helpless oyster.

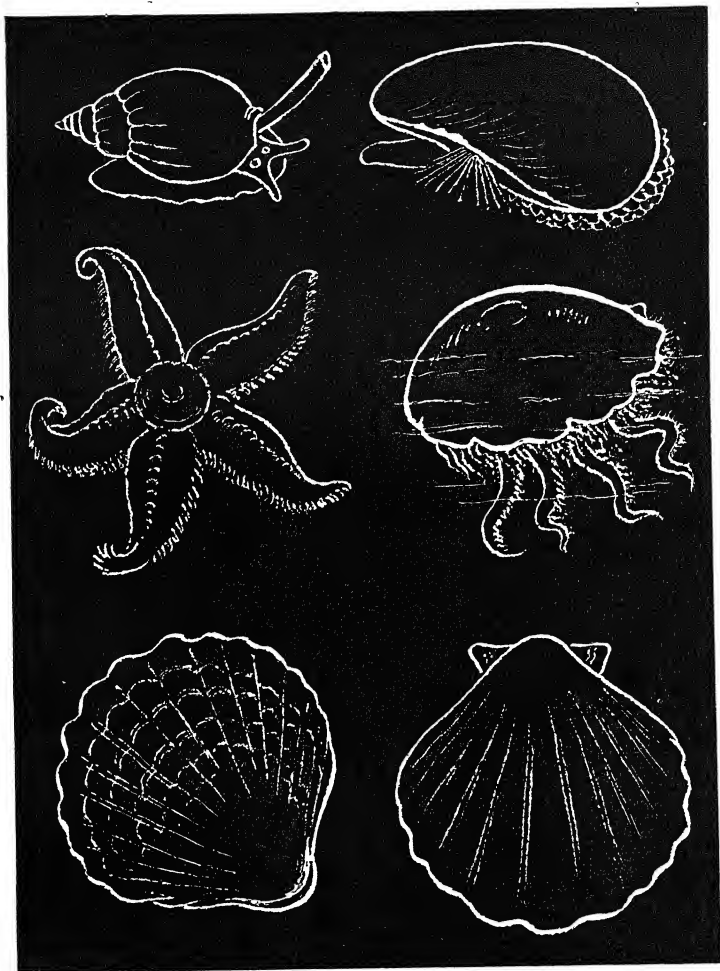
The Jellyfish.—There are many varieties of jellyfish, both large and small, some provided with powerful stings which render them dangerous to bathers. Like the starfish, the jellyfish has no connection whatever with real fishes.

The common jellyfish is shaped like a fringed umbrella with the handle divided into four arms. The mouth occurs in the middle of the lower side, at the junction of the four arms. It feeds something like the starfish, encircling its prey with its arms and swallowing it whole. The arms and fringe of tentacles are furnished with numerous stinging cells, which when touched, break and shoot out little poisonous threads which paralyse or kill the victim.

The jellyfish is largely composed of water, and when floating shows a rhythmical pulsation as it renews and ejects its supply of water. These pulsations enable the jellyfish to move along in still water. A stranded jellyfish soon dries up and dies when the sun falls upon it, leaving only a thin film which shows how much of the original jellyfish was composed of water.

The Mussel.—This edible mollusc is found on rocks and breakwaters all round the coast of Great Britain. It has a bivalve slate-coloured shell with a pearly lining. The two parts of the shell are joined by an elastic hinge. As in all molluscs, the shell is secreted by a special part of the body called the mantle. The cells at the edge of the mantle have the power of separating the carbonate of lime from the blood of the mollusc, and when the lime is thrown out to the surface it hardens and takes the form of a shell. As the shell grows the mantle grows too, and concentric lines can be seen on the shell, radiating from a spot near the hinge, showing the layers of lime added to the tiny original shell.

Mussels are found in great clusters firmly attached by strong thread-like anchors produced by the foot. So securely do mussels attach themselves, that engineers sometimes throw thousands of mussels on the masonry



WHELK

MUSSEL

STARFISH

JELLYFISH

OYSTER

SCALLOP

of which they make a breakwater, knowing that the mussels will bind the blocks more strongly than cement

The creature holds the two parts of its shell together by a powerful muscle attached to each side. When the tide covers the mussel, the shell is opened to obtain food floating in the water, when the tide goes down, the shell is shut and holds enough water to keep the creature moist till the next high tide

The Oyster.—The oyster, like the mussel, is a bivalve mollusc, but the two parts of an oyster shell are unequal in size, the left, by which the animal is attached to the rock, being larger and curved, and the right thinner and nearly flat. The outside of the shell is rough and knobby, with a pearly lining

The oyster attaches itself to a rock when very young and does not move again; it has therefore no muscular foot, and its body is the more delicate and tender on that account. One muscle holds the two sides of the shell together

Oysters are attacked by hordes of enemies. Sometimes, starfish, moving over the sea bottom in armies, destroy several hundred thousand bushels of marketable oysters in a season. Other enemies are the whelk, boring sponges and some fishes.

Pearls of no value are sometimes found in the shells of the edible oyster, the true pearl oyster belongs to another family

The Scallop.—The attractive shells of the scallop can often be seen in fish shops, for they are sometimes used as dishes in baking and serving fish. A single shell is nearly circular, with marked radiating ribs and two projecting "ears" at the apex. The scallop is a bivalved mollusc and holds the two parts of its shell together by means of stout pieces of muscle. The morsels sold and eaten as "scallops" are chiefly these bits of muscle

The scallop is remarkable for being much more active than most other bivalve mol-

luses. Round the edge of the shell of the living creature can be seen a double frill, which is the edges of the mantle. The creature draws water into its mantle cavity, then forcibly ejects the water in a single squirt, thus propelling itself along in a zigzag fashion

The extensive journeying of the scallop made the shell a fitting emblem for pilgrims, who, in the Middle Ages, wore it in their caps to indicate that they had taken long voyages by sea

The Whelk.—This creature is a mollusc closely related to the common snail. It has a distinct head with two pairs of tentacles, and a broad muscular foot by means of which it creeps along. The rest of the body is humped up inside the shell. Like the mussel, the whelk's shell is made of a limy substance produced by the mantle, which covers the humped body. The creature is attached to the shell by a powerful muscle. By means of this, the whelk can withdraw itself entirely into the shell and close the opening with a horny plate

The whelk is the deadly enemy of other shellfish. It is a carnivorous creature, provided with a long rasping tongue which can bore a hole through the toughest shell. Through this hole the whelk extracts the soft body of its prey. When gathering shells you will often find one bored with a round hole, which shows that the whelk has made a meal of the former inmate.

Bundles of whelk eggs are a very common sight on the seashore. They are balls composed of several papery cases attached to one another.

Seaweed.—The varied and beautiful plants of the sea serve many useful purposes. They supply oxygen to the water, form breakwaters which protect coasts from wear and tear, and serve as food for the small sea-creatures which in their turn feed the larger ones. In addition, seaweed makes valuable manure, and is a source of iodine. Many varieties of seaweed are edible

and are used in Ireland to feed cattle and horses.

The commonest forms of seaweed found along our coasts include the pale green edible sea lettuce, the brown bladder wrack with its little air bladders which children love to "pop," and the fine hairs of the green thread seaweed which cover many rocks and make them slippery to climb.

To preserve seaweed.—When visiting the seaside, it is often possible to collect small seaweeds of various beautiful colourings. These make useful additions to the usual sand and shells when building up a seaside group model. If carefully preserved the seaweed may be used over and over again.

First wash the seaweed in a bowl of cold water and remove all salt and sand. Now take one piece of seaweed and place it in a

bowl of water. Slide a sheet of glossy note-paper into the water underneath the weed and lift it out carefully, so that the weed is spread out over the paper. When dry, the seaweed will be found to adhere to the paper and can be used for certain lessons in this state.

If it is desired to make a group model of the seaside, the seaweed can be used to decorate a rock pool. A shallow cake tin makes a good foundation for the pool, but should be painted green or brown to prevent rust. Shore pebbles and shells should be piled in and around the tin which can then be partly filled with water. The seaweeds can be floated off the paper in the same way that they were put on, and tucked in among the pebbles of the pool. When the model is finished with, the seaweed can again be stored on papers for further use.

STORIES TO READ OR TELL

CATCHING THE CRAB

KITTY and Patty were staying at the seaside with their Aunt Mary. It was the first time that they had been away from home without their mother, and they felt very proud to think that they were trusted to stay alone with Aunt Mary.

"We can dress ourselves now," said Kitty, "and we shall be very good, Mother, and not give Aunt Mary any trouble."

"And it will be so nice to get away from the town, and not hear such a noise of carts and carriages," said Patty.

"But you will hear other noises," said their mother. "You will hear the waves roaring as they turn over and over. And the wind often blows very hard, so that you can scarcely hear anything else."

And the little girls found it as their mother had said; but still they were never tired of watching the waves dash up on the beach. And to see the ships go sailing by

was a sight that delighted them. Then they built castles on the sand and looked for the shells and seaweed that the tide had left.

"It would be good fun to catch the seaweed as it floats in," said Kitty. "We might pretend the pieces were great fishes. See, I have got a long cord, and I will make a loop, and we can throw it towards the seaweed that is coming in, and we can see how much we shall get."

"Look there," said Patty. "there is a great bunch coming. I will try to get it this time, and you shall have the next turn."

And then she threw the cord so that the loop caught upon the seaweed, which she dragged ashore.

It was a very fine piece, and the two girls put it carefully on the sand, out of reach of the waves.

"Now it is my turn," said Kitty, and taking up the cord, she threw it into the water.

"That is the piece I want," she said, pointing to a large piece. "It is as good as the bunch you picked up, Patty."

The loop caught the seaweed, and Kitty began to pull.

"There's something holding it fast. What can it be?" And she tugged at it again. "Just help me, Patty. I'm sure there's something pulling it."

So Patty took hold of the cord, and pulled with all her might.

Whatever it was that held it was holding on fast, but at last they got it through the seaweed, and, to their great surprise, found that a large crab had taken hold of the cord, and would not loose it.

"What shall we do?" said Kitty, for the crab crawled along as fast as they pulled the string.

"I don't like it," said Patty. "Let it go."

"But it won't go," said Kitty, "and I don't want to lose the cord. I will give it a run and perhaps it will get tired."

So Kitty set off running and the crab, holding the end of the string, ran with her. They looked so funny that Patty, although she did not like the crab, could not help laughing.

And Aunt Mary, coming along the shore, laughed too.

"Why, Kitty, what are you going to do with the crab?"

"I want him to loose my cord," said Kitty.

After a time the crab did loose it, and went back to the sea, for he was not used to scampering about as he had done with Kitty.

J. G.

Speech training.—1. What does the beginning of the story tell you? 2. Why were Kitty and Patty proud to stay with Aunt Mary? 3. What noises did they hear in the town? 4. What noises did they hear at the seaside? 5. Make a noise like the waves. 6. What did Kitty and Patty do at the seaside? 7. What did Kitty catch on her

seaweed? 8. Why was Kitty surprised? 9. How did Kitty try to make the crab leave hold? 10. Why did Aunt Mary laugh?

THE CROOKED STARFISH

(The real reason why Starfish live on the sands.)

MANY, many years ago when your grandfather was quite a little boy, a little girl who was playing on the beach dropped her pail into a deep pool of water amongst the rocks. It was a new pail, with a beautiful picture of a ship on the side, and as it sank slowly to the bottom of the pool, all the fishes became greatly excited.

"That is just what we want to make us a new house," said Mr. and Mrs. Shrimp, who had just got married.

"No, I will have it for a new hat," said Laurie Lobster, "it is my size."

"Nonsense, I have been wanting a new chair for a long time," said Charlie Crab, "that will do nicely for me to sit on."

In fact, all the fishes wanted it, the prawns, the crabs, the starfish, the whiting and the whelks. And they made such a noise that they woke up Mr. Mackerel. Now Mr. Mackerel is really the King of the Fishes, he wears a striped coat with silver bars on, and always goes to sleep until it rains, then he comes to the top of the sea and flaps his tail on the water to let everybody know that he is about.

He was rather annoyed at being awakened. "What is all this noise," he cried, "cannot I have a nap in peace?"

So they told him all about the wonderful pail that had come into the pool.

"Well, you can't all have it," he said, "you had better race for it."

Now a race in a rocky pool is not like one on land. In a pool you don't race along the bottom, you race to the top of the

water, so all the fishes settled down on the bottom with their noses held high up to get a good start

That is, all of them except Sammy Starfish. He wanted that pail very badly, so when King Mackerel wasn't looking he clambered on to a rock in order to be nearer the top. But King Mackerel saw him, although he pretended that he did not. He swam slowly above the rock where Sammy was lying and suddenly whisked his tail

"Whish-h!" went all the water, and before Sammy knew what had happened, he was washed off the rock, head over heels to the bottom of the pool.

"Ready! Go!" shouted King Mackerel, while poor Sammy was falling over and over.

Away went the others and I am pleased to say that Mr. Shrimp won the race, so

that he and his new bride had a nice ready-made home

But poor Sammy fell on one of his five legs, and when they picked him up, that leg was all crooked

"Oh dear, oh dear!" he cried "Whatever shall I do?"

They often tried to straighten it for him but it was of no use. Poor Sammy had to go through the rest of his life with a crooked leg. He had to walk sideways like a crab and swim round and round like a whelk

"Doesn't he look dreadful!" said all the other starfish. "We won't stay in this rocky pool any longer in case such an accident happens to us"

So they all packed up their furniture and went and lived on the sands, where they can never fall off rocks and be hurt.

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RHYMES AND POEMS

I SAW A SHIP A-SAILING

I saw a ship a-sailing,
A-sailing on the sea,
And, oh! it was all laden
With pretty things for me

There were sweeties in the cabin,
And apples in the hold,
The sails were made of silk,
And the masts were made of gold.

The four-and-twenty sailors
That stood upon the decks,
Were four-and-twenty white mice
With chains about their necks

The captain was a duck,
With a packet on his back,
And when the ship began to move
The captain said, "Quack! Quack!"
Old Rhyme.

Drawing—See that the children know the parts of a ship as mentioned in the second verse—*cabin, hold, sails, masts.*

When the poem has been learned (or recited by the teacher) let the children draw the ship as described in the poem. Another plan is for the teacher to cut out a ship in paper and let each child cut out one or more mice for the sailors, while one child cuts out a duck. The sailors and the captain can then be stuck in position on the ship.

If preferred the children can model their mice and the duck in plasticine or clay

FAIRIES BY THE SEA

Crowds of them and crowds of them
All among the tide,
On big waves and little waves
Having such a ride!

Creeping up the crinkly sand,
 Dancing on the rocks,
 Crowds of them and crowds of them
 In creamy curly frocks

Rows of them and rows of them—
 Fifty thousand score,
 Glittering and twinkling
 All along the shore,
 Sands to dig I knew there were,
 Shrimps to catch for tea,
 No one told me I should find
Fairies by the sea

Rose Fyleman

Note.—This poem has a light, dancing rhythm, suggestive of the splash of waves on pebbles. The tiny fingers of foam that play upon the sand, the froth around the rocks, and the tumbling crests of waves are not "white horses" but fairies "in creamy, curly frocks". This poem lends itself admirably to recitation "Crowds of them" should be spoken softly at first and more emphatically afterwards. The repetition intensifies the effect. Let the pupils repeat the pretty line, "Creeping up the crinkly sand," so as to catch the music. Notice also the alliteration in the last line of the first stanza—"creamy curly frocks". The little child in the poem finds the seaside even lovelier than she expected, for not only were there sands and shrimps, but also twinkling fairies—"Fifty thousand score".

1 Where are fairies found by the sea?
 2 Describe the fairies 3 How many are there? 4. What do children do at the seaside? 5 Write all the words beginning with *cr*. 6. Tell of anything that you know is *crinkly* 7. Tell of anything that *glitters* 8. Tell of anything that *twinkles*.

SAND-BETWEEN-THE-TOES

I went down to the shouting sea,
 Taking Christopher down with me,
 For Nurse had given us sixpence each—
 And down we went to the beach

We had sand in the eyes and the ears and
 the nose,
 And sand in the hair, and sand-between-
 the-toes
 Whenever a good nor'-wester blows,
 Christopher is certain of
 Sand-between-the-toes.

The sea was galloping grey and white;
 Christopher clutched his sixpence tight,
 We clambered over the humping sand—
 And Christopher held my hand

We had sand in the eyes and the ears and
 the nose,
 And sand in the hair, and sand-between-
 the-toes.
 Whenever a good nor'-wester blows,
 Christopher is certain of
 Sand-between-the-toes.

There was a roaring in the sky;
 The sea-gulls cried as they blew by.
 We tried to talk, but had to shout—
 Nobody else was out.

When we got home, we had sand in the
 hair,
 In the eyes and the ears and everywhere,
 Whenever a good nor'-wester blows,
 Christopher is found with
 Sand-between-the-toes

A. A. Milne.

SONGS

BOBBY SHAFTO

Arranged by . .
PERCY G SAUNDERS

OLD RHYME

Doh = G { Quickly

Bob-by Shaf-to's gone to sea, With

sil-ver buck-les at his knee, When he comes home he'll mar-ry me, O

pret-ty Bob-by Shaf-to Bob-by Shaf-to's fat and fair, Comb-ing out his

yel-low hair, He's my love for ev-er-mair, Bon-ny Bob-by Shaf-to

DANCE TO YOUR DADDY

OLD RHYME

Tune by WALFORD DAVIES

Arranged by
PERCY G SAUNDERS

Doh - F At a moderate speed

The musical score is written in 2/4 time with a key signature of one flat (Bb). It consists of a vocal melody and a piano accompaniment. The piano part features a steady eighth-note bass line and a more active treble line with eighth and sixteenth notes. The vocal line includes lyrics and is marked with a 'Doh - F' and 'At a moderate speed'.

First System:
 Vocal: | d .t, d :r ,r .- |
 Lyrics: Dance to your dad-dy,
 Piano: Accompaniment for the first system.

Second System:
 Vocal: | s l ,s :m ,m .- | d .t, d :r ,r .- | s .l ,s :m |
 Lyrics: My bon-ny lad-dy, Dance to your dad-dy, My bon-ny lamb'
 Piano: Accompaniment for the second system.

Third System:
 Vocal: | r ,m r ,d .l, .l, | d ,r .d ,l, :s, .s, |
 Lyrics: You shall get a fish - ie, On a lit - tle dish - ie,
 Piano: Accompaniment for the third system.

Fourth System:
 Vocal: | s, ,l, .d ,l, :s, ,l, .d ,r | m d .d |
 Lyrics: You shall get a her - ring when the boat comes home
 Piano: Accompaniment for the fourth system.